

# THE BOSTON Medical and Surgical JOURNAL

VOLUME 194

APRIL 1, 1926

NUMBER 13

## TRANSACTIONS OF THE NEW ENGLAND BRANCH OF THE AMERICAN UROLOGICAL ASSOCIATION

THE forty-seventh meeting and the eighteenth annual meeting of the New England Branch of the American Urological Association was held in the Aesculapian Room of the Harvard Club on November 17, 1925.

The President discussed the advisability of inviting the National Organization to Boston for the Spring meeting. It was moved, seconded and voted that the Society be invited.

Officers for the ensuing year were elected:

Dr. Wm. W. Townsend of Burlington, Vt., President.

Dr. E. G. Crabtree of Boston, Secretary-Treasurer.

Executive Committee: Dr. William C. Quinby and Dr. George G. Smith for Massachusetts; Dr. C. N. Peters for Maine; Dr. T. N. Hepburn for Connecticut; Dr. H. J. Hoyer for Rhode Island.

Doctors Harold S. Backus of Hartford, Morris B. Sanders of Boston and Fletcher Colby of Boston were elected to membership.

Doctors O'Neil, Barney, Merritt, Papas, Smith and Riley presented case reports. Dr. John Cunningham discussed Bladder Tumors. Dr. Roger Graves demonstrated an apparatus for heat control in treatment of bladder tumors. Dr. John Keefe discussed Diverticulitis of the Sigmoid or Pelvic Colon with Sigmoido-Vesical Fistula.

Meeting adjourned.

E. GRANVILLE CRABTREE,  
*Secretary-Treasurer.*

### CASE REPORTS

#### CALCIFIED CYST OF KIDNEY?—RURAL CALCULI

DR. R. F. O'NEIL, F.A.C.S., Boston: I wish to show this unusual X-ray plate.\* The patient is a young man in the thirties. The presenting symptoms are haematuria and pain in the back—nocturia once.

The plate shows a rounded mottled area, of about the size of a lemon, with a well defined outline, apparently in the substance of the left kidney. On the right side are two dense shadows resembling calculi in the right kidney. Cystoscopy showed on the right side a hydronephrosis—slightly cloudy urine containing pus, and

a function of 45%. There was no secretion from the left. The X-ray catheter and pyelogram showed the larger shadow on the right to be in the renal pelvis and the smaller one in one of the minor calices. Very little of the injection entered the left renal pelvis. It seemed to me the obvious line of treatment is to remove the calculi from the only functioning kidney before more damage is done.

What the shadow on the left is I do not know. It looks like a calcified cyst. It may be a totally destroyed tuberculous kidney.

DR. J. D. BARNEY, F.A.C.S., Boston. I wish to report a case which brings out some interesting points. It was that of a male Italian, 25 years of age, who came to the Clinic about a year ago complaining of generalized abdominal pain of about two weeks duration, accompanied by vomiting on one or two occasions and followed by hematuria. The latter is said to have persisted for some time and the patient gave a very definite story of its occurrence. He had always been constipated but not more than usually so of late, and his bowels had always responded to cathartics.

There was nothing of importance in his past history except that he had had gonorrhoea three times, beginning at the age of 11!

Examination showed a fairly well nourished man who did not look sick or in distress. Laboratory tests showed nothing of importance. Abdominal examination showed a hard, nodular, slightly tender, slightly movable mass in the right loin, corresponding roughly to the shape, size and position of a kidney, palpable bimanually but more easily felt anteriorly. The left kidney could not be palpated.

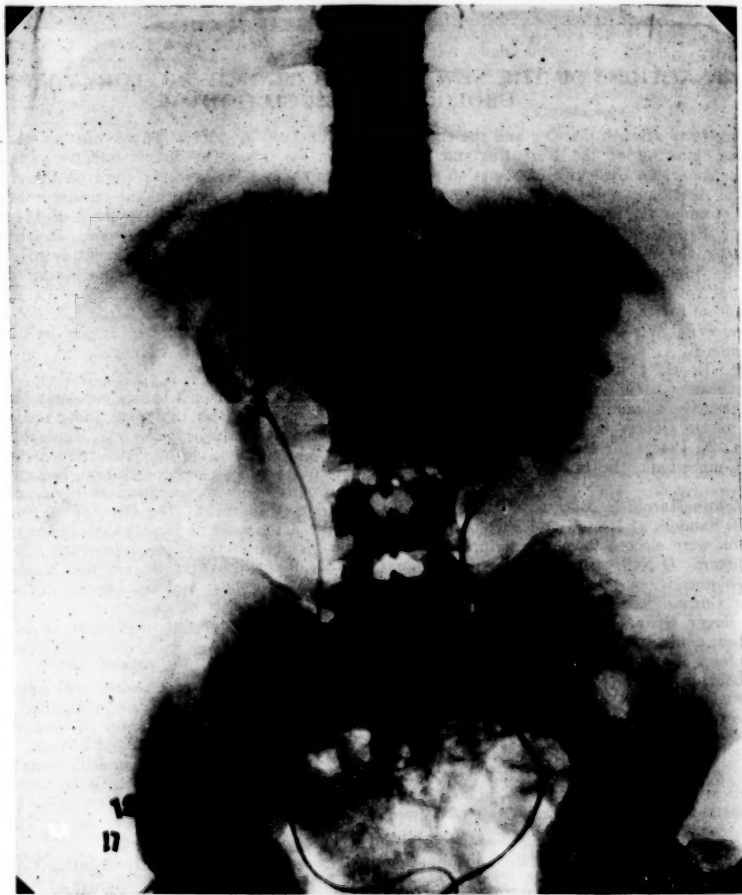
The urine was persistently negative throughout his stay in the hospital. X-rays of the urinary tract were negative. Cystoscopy showed a normal bladder and ureters and No. 6 catheters passed easily to either kidney with a normal flow of clear urine from each. The sediments were normal. The right kidney function was about 25%, that of the left was 10%, both these figures being practically similar on two occasions. A right pyelogram and later a left pyelogram was done. As will be seen, the right pyelogram (Fig. 1) shows what is apparently

\*See plate on page 570.

injection fluid lying in the substance of the kidney but outside the pelvis—a picture which we were unable to interpret, except that it was pathological. The left pyelogram (Fig. 2) shows definite blunting and dilatation of the cal-

bilateral kidney tumor, an occurrence of the utmost rarity.

Being skeptical as to what I was to find, I asked Dr. C. A. Porter to see the patient before operation. He concurred in my diagnosis of a



X-ray showing two calculi in right kidney and large shadow (calculated cyst?) in left kidney.

ices, strongly suggesting the picture seen in pyonephrosis, but unlike it in that the urine was normal.

My preoperative diagnosis was polycystic kidney, although there was no definite data on which to make such a diagnosis. In many respects the findings were quite as suggestive of

kidney lesion and also in my decision to make an anterior intraperitoneal incision. I then asked Dr. E. P. Richardson to express his views of the case. While agreeing that an anterior incision was best, he thought it probable that the mass in the right loin was in the liver and not in the kidney.

On opening the abdomen I came at once upon a much enlarged right lobe of the liver, studded, as was the entire organ, with nodules of cancer. The omentum and hepatic flexure of the colon were densely adherent to the right lobe of the liver and in the colon there was a firm mass the size of a lemon, apparently the primary growth. After some difficulty, owing to adhesions, I was able to palpate first the right, then the left kidney, both apparently normal in size, shape, consistency and position. So far as could be determined, therefore, the peculiarities of the pyelograms were due to pressure from the enlargement of the liver. The patient made a fair convalescence, although he failed rapidly. He died a few days after leaving the hospital.

This case brings out several interesting points. In the first place it shows that we do not know as much as we might about the interpretation of the pyelogram. Secondly, it illustrates the fact that if a case is sent to the urologist he is too apt to think that it must necessarily be a urological case. In this particular instance we should have been more on the alert for other possibilities, although as a matter of fact a correct diagnosis would not have influenced either the operation or the outcome. Thirdly, it is unusual to find inoperable cancer of the colon in a man of 25.

DR. EDWARD L. MERRITT, F.A.C.S., Fall River: A young man, 21 years of age, was admitted to the Truesdale Hospital October 23rd, complaining of severe pain on the right side radiating down the ureter to the groin where it stopped. Dr. William Blanchette who saw him and referred him to the hospital made the diagnosis of polycystic kidney on his family history. He said that the patient's mother died of that condition and that he had an uncle who also died of it. He was seen by the Medical Service, who could find no mass, and a diagnosis was made of right renal calculus. X-ray, however, was negative. There had been no hematuria. Urine was normal. The pain was very sharp and doubled the patient up and I thought he possibly had appendicitis. The white count was 12,500. Finally we cystoscoped the patient, and the bladder was found to be normal. There was urine coming from the left ureteral orifice but none from the right. I catheterized the left ureter with no difficulty. On the right I met obstruction 5 centimeters from the bladder which in spite of all manipulations of the catheter I couldn't pass. Another X-ray picture was taken with catheters in place and it showed nothing. I did a function test. No phthalein came through on the right side. Phthalein appeared on the left in three minutes and in half an hour he had excreted 18 per cent. The urine from the left kidney was normal. I then attempted to do a pyelogram but was unable to

inject any fluid. We finally decided that he ought to be operated upon because of the very severe pain. Still no mass could be felt on either side, but immediately after he was under an anesthetic we could all feel a definite mass on the right side. Dr. Truesdale operated and exposed the right kidney through a long abdominal incision. The kidney was a tremendous affair and he found it to be polycystic. Just below the kidney pelvis was a stone impacted in the ureter. He did a nephrectomy, and I have here the photograph and the specimen. Of



course, the operation being done on October 24, the specimen has shrunk to about one third its original size. You can readily see that there is only a small area of normal kidney parenchyma left. In the bottle is the stone, which did not show in the X-ray. The patient made an uneventful convalescence. We don't know when his other kidney will kick up. At the present time he has no evidence of any trouble there, although of course there is some decrease in function. (Showing specimen.)

DR. R. C. GRAVES, Boston: Inasmuch as we know that about 85 per cent. of kidney calculi give X-ray shadows, the remaining 15 per cent. are always of the greatest interest. Usually these shadowless stones are pure uric acid or pure cystin, but I wish that Dr. Merritt would analyze the stone that he has reported, and tell us about its composition, at the next meeting.

DR. AUGUSTUS RILEY, Boston: I have here an X-ray which is interesting (showing plate). It shows supernumerary ureters. Dr. Arthur Chute operated on this man two or three times, and reported the case 1907, BOSTON MEDICAL AND SURGICAL JOURNAL. I cystoscoped this man and on the preliminary observation I saw what I thought was urine coming from both ureters. I got clear urine from this catheter on the right, and from this one on the left I got about the same amount as from the right side, but the urine was turbid. Then he was pyelographed. As you see here the ureter stumps apparently

coalesce. One of the ureter stumps apparently open into the prostatic urethra.

DR. A. L. CHUTE, F.A.C.S., Boston: The patient Dr. Riley has reported was a very interesting case. He was an Armenian cook who came to the Boston Dispensary about 20 years ago with the story of having acquired a urethritis years before of which he could not be cured. If I remember, he had been seen in Vienna and in several of the European clinics as well as in several in this country. Pressure on the left side of his bladder increased the pus. This cavity was drained by a tube for a time. When the tube was removed there was pain over the region of his left kidney and also temperature. An incision was made in the left and the region behind the bladder explored. Two ureters were found; one, that to the inside, was at least 1½ cm. in diameter; the other, normal in size. The large one connected above with a flabby sac evidently a pyonephrosis. This ureter was cut and a tube carried into the lower part and brought out through the incision; the upper part of the ureter was fastened in the upper end of the incision. Fluid syringed into the tube in the lower section of the ureter would appear at the meatus. At a third operation the double-pelvis, pyonephrotic kidney was removed. This followed Weigert's rule that the ureter having the lower and more external opening came from the upper kidney pelvis, while that opening more to the inside and above connected with the lower pelvis. The unusual shadow seen in the X-ray Dr. Riley has shown is due I believe to the lower section of the dilated ureter; this ureter was cut some distance above where it entered the prostate and has evidently remained a pyogenic sac connecting with the prostate.

DR. JOHN PAPAS, Boston: As regards diathermy in the treatment of gonorrhoea and its complications, I started with acute gonorrhoea and used the applicators, and the results were unsatisfactory as it incubates the disease.

The idea came to me to take two plates and heat the penis in that way (showing). I selected 35 case of acute gonorrhoea. I ran quite a number of them with this method with two thin plates and a rubber band, but it was an unsatisfactory way to hold the plates, so the idea came to me to have an instrument which would hold steady, so the idea came to me to use an applicator (showing instrument). But we got only two cures. We got as high as 110 degrees Fahrenheit, but the patient couldn't stand more than 107, for 35 minutes. We gave treatments every day, and out of these 35 only two were cured. So the results were unsatisfactory. So we practically stopped using it.

Then the idea came to me to try it on chronic prostates, and I picked up a number of cases which had been dilated and I checked up, and

they had a large amount of pus, and I gave six to twelve treatments twice a week with this applicator (showing). With this instrument I have raised the temperature as high as 120 without any discomfort on the part of the patient, and then after these treatments I checked them up and found considerable decrease in the amount of pus, but they did not clear up completely.

In acute posterior urethritis with burning they get marked relief with one or two treatments.

In epididymitis it wasn't satisfactory; but if you get them early enough, it does good. If you get them later, it does practically no good. Whenever there is definite abscess formation it makes them worse; but in acute epididymitis if you get them early enough it does good and requires two or three treatments.

I had five cases of sexual impotence which might be due to some glandular difficulty. I have used this on these five cases in which the Wassermann was negative, but the cases all had flabby prostates. In all these it caused marked improvement, but the improvement was temporary.

Diathermy can be used as an adjunct in gonorrhoea but not in the acute stages. In many cases when you think the disease is only anterior, it is posterior and we can't get at it.

DR. G. G. SMITH, F.A.C.S., Boston: I would like to record an observation on the bactericidal action of sodium iodide solution. A specimen of 12% solution was given to Dr. F. H. Slack of the Sias Laboratories, who reports as follows:

"Into each of two test tubes was placed 5 c.c. of the sodium iodide solution. To one was added ½ c.c. of heavy bouillon growth of *Staphylococcus aureus*, to the other of *B. coli*.

Transplants were made at 24 hour intervals to agar slants, transferring ½ c.c. of the material and placing the tubes horizontally for five minutes with the liquid spread over the surface of the agar to allow the bacteria to settle before standing them upright and incubating them. The results were:

After 24 hours' exposure to sodium iodide solution, heavy growth of both organisms.

After 48 hours' exposure growth was appreciably less.

After 72 hours' exposure growth was scanty.

After 96 hours' exposure, no growth.

After 120 hours' exposure, no growth.

These results show a slow but definite and reliable bactericidal action by the 12% solution of sodium iodide."

DR. W. W. TOWNSEND, F.A.C.S.: I was wondering when Dr. Smith reported the bactericidal action of sodium iodide whether that would explain these colon urines. You do a pyelogram, and the patient is improved as far as the colon

cystitis is concerned. I thought that was due to stretching the ureter, but it may be due to the bactericidal action.

DR. G. G. SMITH: I don't believe it is due to the bactericidal action but to the mechanical flushing out.

DR. W. W. TOWNSEND: That would be interesting to work out.

DR. G. G. SMITH: Its bactericidal action is too weak.

## TUMORS OF THE BLADDER

### REMARKS ON THE ESSENTIAL FEATURES AND DEMONSTRATION OF A NEW DIATHERMY DEVICE

BY JOHN H. CUNNINGHAM, M.D., F.A.C.S., AND  
ROGER C. GRAVES, M.D.

I THINK we will all agree that the treatment of malignant disease of the bladder is one of, if not the biggest unsettled problem in urology. In the short allotted time I wish to briefly touch upon some of the features which I believe to be of the most importance; following which Dr. Graves will demonstrate a device which we have been employing for the destruction of malignant tumors of the bladder during the past year, and which device embodies new features which may prove valuable.

The reason that the problem is so difficult, is that tumors of the bladder, particularly of the malignant group, present the same difficulty of successful eradication as do tumors of similar character elsewhere in the body, and that early recognition, at a time when they might be more successfully dealt with, is unusual. In fact, the early recognition of new growth of the urinary bladder is rather *more* unusual than that of a new growth in most other deep parts of the body, for the reason that malignancy in the urinary bladder does not often produce general manifestations and early local symptoms in the same proportion of frequency as in the abdominal organs. In most instances the disease within the bladder runs its course of development without suspicion of its existence being aroused by local manifestations until the growth is far advanced. This unfortunate disproportion between the development of the growth to the onset of symptoms is the reason for its late recognition and advanced state when discovered.

For many years I have been greatly impressed with the frequency of observing well advanced tumors of the bladder upon cystoscopic investigation following the first attack of hematuria and have consequently come to regard painless hematuria almost diagnostic of bladder tumor. The majority of the histories of such patients fail to reveal symptoms which should lead to investigation of the urinary tract prior to the onset of the hematuria, which fact is most unfortunate.

Even with the general medical profession recognizing that hematuria calls for immediate urologic examination, we are more often confronted with advanced than early neoplasm when the hematuria is from a bladder tumor.

The *prognosis*, therefore, so far as cure is concerned, is bad in the malignant cases, and recurrences of benign tumors requiring repetition of treatment is common.

The *important steps of development* in connection with the subject of tumors of the bladder, both benign and malignant, may be briefly summarized as follows:

The ability to make the diagnosis without operation by the development of the modern cystoscope about 1900;

The clinical classification of the types of tumors as benign or malignant by cystoscopic study;

The demonstration by Beer in 1910 that benign bladder tumors may be destroyed by fulguration without cystotomy;

The employment of radium as a therapeutic measure in malignant and resistant benign tumors since 1915;

The development of radical surgical procedures;

The employment of the X-ray pre-operative and as a post-operative measure;

The recent development of heat therapy, termed diathermy, as a destructive agent.

The *reported favorable results*, in most instances, must be in question, as the classification of an individual tumor is often made only by vision through the cystoscope, and such a classification is obviously open to error. Furthermore, different pathologists are at variance in the histological classification, both in the matter of malignancy and in the degree of malignant activity. The treatment of bladder tumors by radium, X-ray, and diathermy, whereby the whole specimen is not available for study, has made less material available for pathological research, and as a matter of fact, these less radical methods have led to the neglect, in many recorded cases, of even taking a specimen for histological diagnosis.

In view of these facts, reported cures are open to question, and until we can get a histological classification acceptable to both the clinician and the pathologist, and reports are made on the basis of a generally accepted histological classification, we may believe or disbelieve reported cures as we choose, with the exception of those reports with perfectly definite histological findings, and those which are obviously benign because they disappear following fulguration.

A plea is made for a uniform histological classification that we may properly judge the true situation of variable malignancy and thus be able to evaluate the results of the various

therapeutic measures now in use. This matter of arriving at a uniform pathological classification was informally discussed at the last meeting of the American Association of Genito-Urinary Surgeons and it is possible that some pathological classification may be defined as a uniform working basis.

*Considering the results of treatment*, based on the present clinical classification by vision, and as the result of therapeutic measures, we know that fulguration destroys benign and non-infiltrating malignant papillomata by repeated treatment through the cystoscope and that such tumors, if resistant to fulguration, may be made susceptible to it by exposing them to radium.

In our experience with malignant papillomata, having an infiltrating base and resistant to fulguration and radium applied cystoscopically, the disappearance of the growth has been brought about in some instances through cystotomy and radium implantation alone in the infiltrated area; or in other instances by destruction of the area by heat and the implantation of radium about the margin of the area destroyed. When, however, the tumor is deeply infiltrating our results, by whatever method of treatment, have been far from satisfactory. If the tumor is not extensive and resection can be carried out, leaving a safe margin of healthy tissue, with or without the necessity of ureter transplantation, we may occasionally produce a cure.

We believe that if resection is to be carried out, that the tumor area should first be destroyed by heat. Even with such destruction of the tumor area prior to resection and doing a most radical operation, it has been our experience that recurrence is more common than otherwise. In some of these patients we have operated several times, dealing with the recurrence in some by less extensive resections and in others by employing diathermy or radium alone, or both combined.

In the great majority of patients in this group, a cure has not been obtained, even when the original growth was relatively small and seemed favorable for radical surgery.

When the tumor is deeply infiltrating and of considerable size, which unfortunately is the condition which we have most frequently observed, resection is out of the question, and it has been our custom in such circumstances, to employ physical agents, either in the form of radium or diathermy, or both combined, for its destruction. In this group, most of which may be termed inoperable, our results have been almost uniformly unsatisfactory, and the only favorable results which we have obtained we believe to be due to a relatively low form of malignancy.

It seems to us that whatever is done in the extensive infiltrating malignant tumors of the

bladder, recurrences are common, and any new procedure which may have an element of promise for better handling the situation, is most welcome.

With the advent of diathermy our investigations convinced us that the proper form of heat is a destructive agent, and that larger areas may be destroyed by its proper application than by any other means.

The only limitation which appeared to us in connection with the destruction of tumor tissue by heat was that of destroying only the desired area without also destroying adjacent healthy tissue and injuring nearby important structures. In the employment of the ordinary form of diathermy, we felt that in some instances we might be producing too much destruction and that in others perhaps not enough, and it was obvious that there was certainly no means of deciding this very important matter.

We soon became convinced that if diathermy was to be employed with any degree of accuracy, that some means to determine what we were doing with it in any given operation was a primary essential. In consequence the device which Dr. Graves will show has been constructed with the aid of Prof. Wm. Bovie of the Bio-physics Department at Harvard, and by its use we feel that we have a method by which we may destroy the desired area completely without the destruction of adjacent areas of structures which should be preserved.

This form of what we choose to call controlled diathermy we have been using during the past year, and have done enough cases to lead to the belief that its employment in the so-called non-operable cases, and even in some less advanced cases, with or without combined treatment with radium, is the best means at our disposal.

Dr. R. C. GRAVES, Boston, in discussing the question of diathermy, spoke as follows: I think we have all been skeptical about the value of diathermy, but the reports of its use which have come from various clinics in the past few years, have been so stimulating, that most of us now feel compelled to regard it with interest. While it is not my purpose tonight to defend diathermy or any particular technique against all the field of therapy, it is my firm belief that electric energy used for the production of heat in the depths of tissues, is destined to become one of the most potent agencies at our command in the treatment of malignant growths. Its further value in combatting the various forms of gonorrheal infection is also of the greatest interest to us as urologists, but at this time we must confine our attention entirely to the tumor phase of the problem.

The greatest defect to date in the use of diathermy for any purpose has lain in an absolute lack of accuracy of dosage. Heat has been ap-

plied to the lesion, but there has been little or no knowledge concerning the degree of heat developed or the temperature to which the tissue could be subjected with safety. With this unavoidable ignorance as to the dose of the medicine it is hardly surprising that the results of its use have been inconstant and many times unsatisfactory. The reports that we have received from the various clinics in which diathermy is employed have been largely lacking in value, in this regard, because of the fact that all workers in this field have been compelled to denote their dosage of heat in terms of amperage, or amount of current delivered. This, of course, is not dependable for there has been no standardization of the different forms of diathermy apparatus, and the efficiency of one machine may differ greatly from that of another maker. Furthermore, the amount of current used is really the consideration of least importance instead of being the factor of paramount interest. Too much of electro-therapy still lies beyond our ken to make it worth while for us to attempt to speak in terms of amperage. We do not know, for example, the path of energy through the body from one electrode to the other, or the exact form of that energy, and we have failed to take into consideration the varying resistance of the different tissues of the body substance.

From a clinical point of view in the therapeutic use of heat, there are really just two questions of fundamental importance. One is the temperature actually developed in the tissue to be treated, and the other the length of time that that temperature is maintained. The result will always be the product of these two factors.

Thus far there have been but few attempts to estimate the degree of heat. A gloved finger in the rectum has been used as a guide in the burning of tumors of the bladder floor, and as a warning against too high temperatures. This is inconvenient and, certainly, hardly accurate. There have been recently devised also, electrodes which contain thermometers. Such electrodes, while helpful, inform the operator only concerning the degree of heat within the instrument, and give him but slight knowledge of the actual temperature conditions within the body of the patient. There is a technical error, moreover, in this method, because of the definite lag that will always exist in the recording of the thermometer so placed within the electrode.

The method which we are using was devised with the purpose to obtain in diathermy this much needed factor of accurate dosage. Our apparatus consists fundamentally of a multiple system of thermocouples made through the co-operation of Prof. Wm. T. Bovie. The variable junction of each couple lies in the tip of an

intravenous needle, and the whole system communicates with a central switchboard which in turn communicates with the recording meter. (Showing and demonstrating instrument.) These thermal junctions measure heat with far greater accuracy than is possible with any thermometer. When they are embedded in the tissue, moreover, they record the temperature actually existing in that tissue, thus providing us with the essential information in the accurate use of diathermy. With this information we may be certain of complete destruction of the tumor on the one hand, and protection against injury of vital structures, on the other.

When the tumor has been exposed it is encircled with the needle-junctions, which are implanted in the normal tissue around its periphery in all planes. As we proceed then with the destruction of the mass, we are guided by the reports of temperature which come from these outposts, as to the degree of heat produced. In this manner we may destroy the tumor tissue within the circle of needles and at the same time be confident that we have not subjected normal tissues to too great heat. For further protection against injury of vagina or rectum in treating with diathermy tumors of the floor of the bladder, we have made vaginal and rectal applicators which are left in position during the operation, and which contain thermal-junctions adjusted to face anteriorly at the level of the growth.

The temperature reading from any position about the tumor or from the rectum or vagina may be reported at any time to the surgeon by the observer, with a scarcely perceptible delay. So far as the recording meter is concerned, it may be said that thermo-couples ordinarily register those differences in electro-motive force which we interpret as differences in temperature, on a millivolt meter calibrated in units of electricity. The meter which we use, however, has been calibrated for us by Prof. Bovie in units of heat so that temperature readings may be taken directly without loss of time. It is our purpose to make this whole apparatus so simple and so compact that it can be embodied readily in any of the now-existing diathermy machines. Those parts which come in contact with the patient, and which are handled by the surgeon, of course permit of sterilization.

In these treatments two electrodes are used; one, the active electrode, which supplies the current, and the other the inactive or better, the directing electrode. The latter, for tumors of the bladder, is usually a lead plate placed against the outer surface of the body at a position opposite the growth. The active electrode exists in a variety of forms. The flat plate-like applicators which are generally supplied are quite satisfactory for sessile superficial growths. We feel, however, that an electrode

which can be embedded directly into the substance of the tissue to be destroyed, is greatly to be preferred in the more extensive and infiltrating types. The instrument which we employ for this purpose, I designed originally for use in the chronic infections of the adult cervix. It may be obtained from Wappler & Co. While it has been of the greatest value in the treatment of endocervicitis, and has given the most excellent results, that forms another story. We subsequently found that this electrode works very well in the destruction of tumors. It is made, as you see, in the form of an ordinary wood-screw, with an insulated shaft. The sharp spiral thread provides ease of introduction into the tissue, with a minimum of trauma. It is literally screwed into position, the thread affording more intimate contact and a greater surface for radiation than could be obtained with an instrument of smooth surface. At the end of the procedure, withdrawal of the screw in its long axis, moreover, serves as a curette to pull away the core of cooked tissue.

It seems quite proper to speak of cooking in this connection for the heat of diathermy diffuses slowly and uniformly without the sudden charring which occurs with the actual cautery and which promptly insulates the tissue against the spread of further heat.

In closing it should be said that we do not submit our plan of Controlled Diathermy as a substitute for the now-existing methods of treating bladder malignancies. Surgery, radium, and deep X-ray, together with diathermy, must all be depended upon in this most perplexing problem of bladder cancer. We do suggest, however, that diathermy with such control as we have described, can be made a far more valuable adjunct than it has been in the past.

DR. A. L. CHUTE, F.A.C.S., Boston: The discussion has very properly been pretty much limited to the unusual methods of treating bladder tumors but in our enthusiasm for these newer things we must not forget that the careful surgical removal of bladder tumors probably gives as good results as anything else. I got one of my secretaries to go over a number of cases of bladder tumor in which only surgery had been used and in which there were some very satisfactory results, a few of which I will cite briefly in a moment as an illustration that surgery still has as important a place in the treatment of these growths as diathermy or radium. In fact I believe there is a growing skepticism about the value of radium in the treatment of bladder tumors, a feeling that it should be used only as an adjunct to surgery.

In 1918 I excised a large mass from the bladder of a woman of 52; this mass involved the region of the right ureter which had to be cut

and reimplanted. This mass had every evidence of being a malignant process though I cannot find any pathological report upon it: This patient's physician reported that she was well as recently as last week.

Another instance in which surgical excision alone was employed was that of a man of 76 operated upon in 1915; the pathological report was "carcinoma". This man died in February 1924 at the age of 85, nine years after operation, with no evidence of any recurrence of his trouble. The tumor mass in this instance was a large one.

A third case was that of a woman of 67 upon whom I operated in 1913. This patient had a big, ulcerated area as large as a silver dollar involving the region of one ureter. This was excised with a good margin and the ureter was reimplanted. The pathologist reported "squamous cell carcinoma". No radium was used. In 1924, eleven years after operation, that woman was still well. I have mentioned these clinical cases lest that in our enthusiasm for radium and diathermy we forget that we have in surgery a means that gives good results in a certain number of cases of bladder tumor.

DR. G. G. SMITH, Boston: Has Dr. Graves worked up any data as to the degree of temperature which is necessary to destroy tissues, or to what height heat may be raised with safety?

DR. O. D. PHELPS, Worcester: I would like to ask what relation the thermos bottle has to the apparatus.

DR. R. C. GRAVES, Boston: Dr. Smith has asked an exceedingly important question. I wish I could answer it accurately. As yet we do not know the maximum degree of heat to which normal tissue can be subjected, and still recover. Surprisingly, there is nothing in the literature that can be taken as a reliable guide. There are scattered data, but these are not of much practical aid. The information that is available has led us to stop cooking when we have been in the vicinity of 55 to 60 degrees Centigrade for one to two minutes.

We have talked about this question many times and at great length with Prof. Bovie and we hope to answer it with the help of the kind of apparatus that I have been describing to you. In fact, I think that the lack of information on this point is due entirely to the previous lack of a method of accurately measuring the degree of heat within tissue. The problem is far more difficult, moreover, than it appears to be at first glance, because of the cooling factor in living tissue produced by the circulating blood.

Dr. Phelps has asked about the use of the thermos bottle. This provides for the constant junctions of the various thermal couples.

There is one variable and one constant junction in each couple. When the temperature of one is changed, a current is formed in the circuit which expresses the difference in the electromotive forces of the two. This current may be recorded on a microgalvanometer, and may be interpreted as difference in temperature. When the temperature of the constant junction is known, the temperature at the variable junction can then be estimated.

The thermos bottle, in answer to the question, merely provides the constant temperature for the several constant junctions, during the period of the operation.

I am glad that Dr. Chute sounded his word of warning. We have had no intention of delaying surgery. It must, of course, still be depended upon to carry the bulk of the burden. I intended to emphasize the fact that diathermy is merely one agent at our command, but that if we are to use it efficiently, we must use it accurately.

DR. W. W. TOWNSEND, Bennington, Vt.: I think Dr. Cunningham brought that out in his paper, and that is that diathermy is a method of treatment only applicable to things that were not operable.

DR. J. H. CUNNINGHAM, Boston: I don't want any one to believe for a moment that we hold that diathermy is the best method for handling all tumors of the bladder. The results of our series of cases treated by the various methods at our command coincide with the results of various forms of treatment at other clinics and that resection gives the best results. The cases falling into the resection series show, however, that the tumors were suitable for resection, which means that the tumor could be excised without being incised.

It is my feeling, as I tried to state in the paper, that when a real resection is possible, with or without ureter transplantation, it should be done and the physical agents, radium, X-ray, and diathermy, should only be employed as an adjunct. These physical agents, however, of which diathermy is perhaps the best, are a means of treatment of the new growth when its extent makes a complete resection impossible.

#### DIVERTICULITIS OF THE SIGMOID OR PELVIC COLON WITH SIGMOIDO-VESICAL FISTULA

BY JOHN W. KEEFE, M.D., LL.D., F.A.C.S.

As illustrating the intimate relationship obtaining between the special field of genito-urinary surgery and the problems of general surgery I purpose to report three cases of diverticulitis of the colon, one of which was attended by sigmoido-vesical fistula, and to add some

brief remarks concerning the diagnosis, pathology and treatment of diverticulitis of the colon.

J. W. M.—A physician, aged 65, weight 160 pounds, for many years had attacks while eating, which gave him a choking sensation and were attended with coughing and vomiting.

An X-ray examination with the fluoroscope showed a diverticulum of the oesophagus; the shadow was about three inches long and three-quarters of an inch in the widest diameter. As the patient drank the milk containing the barium the shadow on the fluorescent screen passed down the oesophagus and then entered the diverticulum. One could see the shadow gradually filling the diverticulum; and, after it was full, the shadow followed the course of the oesophagus into the stomach.

A series of radiograms of the colon, the most remarkable I have ever seen, which I present for your inspection, show numerous diverticula in the transverse, descending and pelvic colon.

February 25, 1919, several months after the X-ray examination, the doctor was taken suddenly ill with abdominal pain, nausea, vomiting, rise in pulse and temperature. He developed symptoms of pneumonia and died within three days. I believe that besides the lung involvement he had a ruptured diverticulum of the transverse colon.

B. S.—Male, aged 52 years, came under my observation in January, 1907. His weight is now 200 pounds and he stated that he had lost 26 pounds. Last August, while taking a shower bath, he was seized with pain in the lower abdomen, attended with nausea. He thought it was due to something he had eaten during the hot weather; but since then he has had more or less discomfort from time to time in the left lower quadrant. Two weeks ago he again complained of more acute pain in the left iliac region. I had him under observation for a period of one week. He had a tendency to constipation, and a feeling of discomfort in the left iliac region. There was local tenderness on pressure; a sense of resistance, and the suspicion of a mass beneath this area. Rectal and blood examinations were negative. A week ago he had a slight chill and elevation of temperature. A diagnosis of probable diverticulitis of the sigmoid, with the possibility of carcinoma or a left-sided appendix, was made.

He was operated upon by another surgeon; diverticulitis of the sigmoid was found, seven inches of the bowel was resected, and an end-to-end anastomosis with sutures was performed. He died from peritonitis due to leakage at the site of the anastomosis, a condition which was found at the autopsy. The pathological examination showed numerous diverticula of the sigmoid.

J. E.—Male, aged 40 years, with a tendency to obesity. He had an attack of pain across the lower abdomen in March, 1912. There was no nausea or vomiting. He took a cathartic and went to his office; as the pain continued, he returned home at 5 P. M., took a dose of castor oil and went to bed. After his bowels moved he felt better; but the pain returned again about midnight. He sent for a physician, who said he had "inflammation." He remained in bed three days and then resumed his work, and felt well until September 8, 1912, six months later, when he complained of soreness in the left iliac region. His physician prescribed pills and enemas, and, as he felt better, he went on an automobile trip for four days. He was able to attend to his business subsequently, but felt discomfort in the left lower abdomen. He then consulted a surgeon, who said he found "a bunch there." His physician thought he had a rupture and referred him to me September 28. The patient said he had been having night sweats.

His temperature was 100 degrees and pulse 96. A mass, tender on pressure, was palpable in the left iliac region, and a diagnosis of probable diverticulitis of the pelvic colon was made.

Operation September 29, 1912. An abscess, containing foul smelling pus, was opened and drained for eight weeks. Small amounts of feces were discharged from the wound from time to time. The wound healed over; but during the next two years it became necessary to reopen it several times. The discharge each time contained pus and feces. Finally the wound closed. The patient regained his former weight and was able to attend to his business as a woolen manufacturer the greater part of the time.

side and to prevent feces and gas from entering the bladder.

January 18, 1917. Operation. Excision of the sigmoid containing numerous diverticula and closure of the opening in the bladder, following excision of the sigmoido-vesical fistula.

Anaesthetic—Gas oxygen, ether.

The skin was prepared with tincture of iodine. U. S. P., half strength.

The colostomy opening and the open suppurating wound in the left iliac region were packed with iodoform gauze and carefully isolated with sterile coverings. A median incision was made extending from the pubes to two inches above the umbilicus. Upon



PLATE I.

A mass could still be made out in the left iliac region and I advised its removal; but, as he was "feeling well," he said he thought he would "let well enough alone."

On August 1, 1916, he began to have pain over the bladder region, and about August 20 he passed gas through his urethra. I saw him September 6. His urine contained pus and fecal material. A cystoscopic examination revealed a small opening in the bladder connecting with the pelvic colon. There was redness, tenderness, and swelling at the site of the former operation.

September 7, 1916. Operation. The scar was excised and pus and feces were removed from a cavity three inches deep. The wound was thoroughly curetted and drained.

September 18, 1916. Operation. A left inguinal colostomy, above the diseased area in sigmoid, was performed to relieve the irritation from the feces, to give the inflammatory mass an opportunity to sub-

opening into the peritoneal cavity a large mass composed of the entire sigmoid with numerous diverticula, portions of the omentum and inflammatory deposits presented. The omentum was separated and bleeding points ligated. The mass was carefully removed from the bladder and the sigmoido-vesical fistula cut across. The sigmoid was then separated from adjacent structures and excised, with clamps placed on the descending colon below the colostomy opening and on the upper part of the rectum. We met with numerous difficulties in freeing the diseased bowel from the surrounding parts as everything was distorted from adhesions and inflammatory deposits. Running sutures of catgut were placed in the upper and lower cut ends of the bowel, with the crushing clamps in place. The clamps were then removed and the sutures tied. The ends of the bowel were inverted and a second row of sutures united the peritoneum over the inverted stumps of the bowel. Owing to the length of the bowel removed

it was found impossible to unite the descending colon with the rectum, so the patient has the inconvenience of a colostomy. The fistula into the bladder was removed and the muscular wall near the opening was sutured with catgut. A second row of sutures united the peritoneum over the first row of sutures. A retention catheter was introduced which remained in place one week. Bladder irrigations were made for several weeks. The median incision was closed in the usual manner.

It is now nearly nine years since this man was operated upon and he is the picture of health. During this time he not only has been able to manage

of the coats of the bowel represented; while the acquired, wrongly called false diverticula, comprise only mucous, submucous and peritoneal coats, with, occasionally, a few muscular fibers. They consist of a hernial protrusion of the mucous coat, through the musculature of the intestine, and are covered by the peritoneum. The mucosa is found definitely atrophied near the lumen of the diverticulum, where pressure has been exerted by the thickened intestinal wall.



PLATE II.

an extensive business but takes part in numerous social activities.

The diagnosis and treatment of diverticulitis of the colon demands not only the highest technical skill and ingenuity, but also sound surgical judgment.

Diverticula have been found in all parts of the colon from the caecum to the rectum; although they occur with greatest frequency in the sigmoid.

They may produce little or no discomfort and the patient may live to old age; again they may cause serious illness, with involvement of adjacent structures and even may terminate in death.

Diverticula are either congenital or acquired. The congenital are those in which we find all

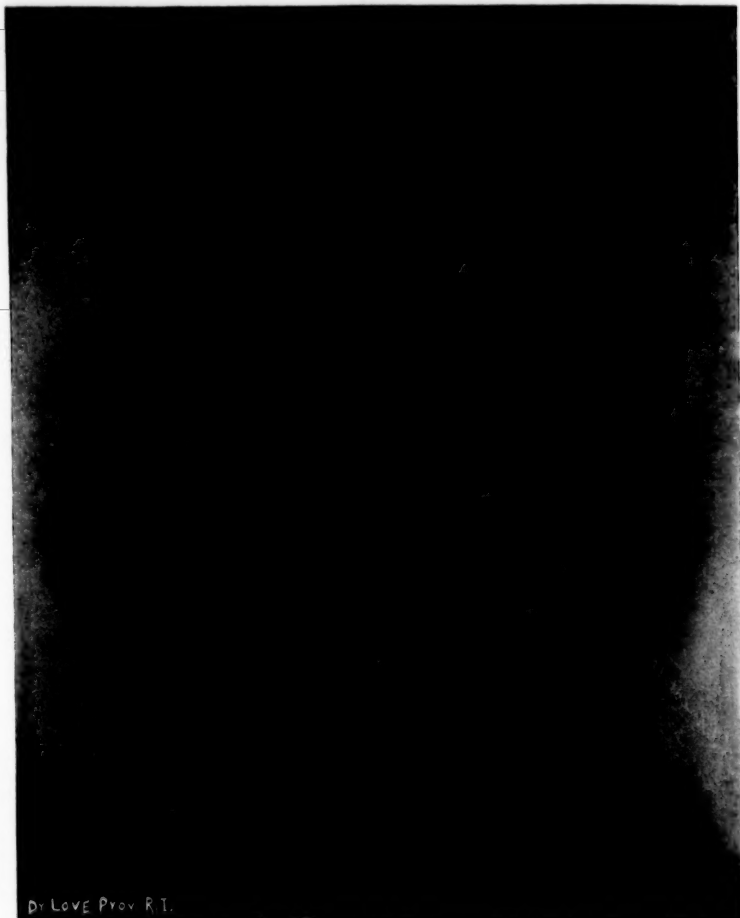
The submucous or fibrous coat is thicker in the proximal than in the distal portions of the diverticulum, which seldom contains any longitudinal or circular muscle bundles. They frequently contain hard, brown fecal concretions, which may produce ulceration, thus allowing bacteria to enter and set up an acute inflammation of the surrounding structures. Usually the walls of a diverticulum show evidence of a chronic inflammation in the mucous and submucous coats, the latter abounding in fat. There is a hyperplasia of all the adjacent parts.

The inflammatory mass is the result of bacterial invasion through the walls of the diverticulum, which may produce peritonitis, mesenteritis, inflammatory deposits, and adhesions to surrounding parts, peridiverticulitis, abscess and fistulae.

The causes of diverticula have not been definitely determined. Some have stated that they are due to a weakening of the muscular wall of the bowel attended with increased internal pressure which forces the mucosa through the

transverse colon, where the contents are fluid.

Diverticula may be found at any point on the circumference of the large bowel, but the greater number are on the sides, between the mesocolon and the longitudinal muscular bands. As



Dr. Love Prov. R.I.

PLATE III.

muscular walls and pouches the overlying peritoneum.

The pressure of formed fecal matter in the sigmoid may be an important factor in the production of diverticula, but leaves unexplained the presence of diverticula in the ascending and

they increase in size, they pass through lines of least resistance toward the mesentery or appendices epiploicae. The point where the mucosa of the diverticulum pierces the muscular wall is located, in most instances, where the blood vessels also pierce the muscular coat, well up

on the sides of the intestine and remote from the mesentery. There may be no evidence of peridiverticulitis and the diverticula stand out freely from the bowel wall.

Diverticula occur about twice as often in

iliac region. There is usually constipation and a feeling of discomfort followed by one or more chills, with rise of temperature and the blood examination shows a leucocytosis.

The pain is a sudden onset and is definitely

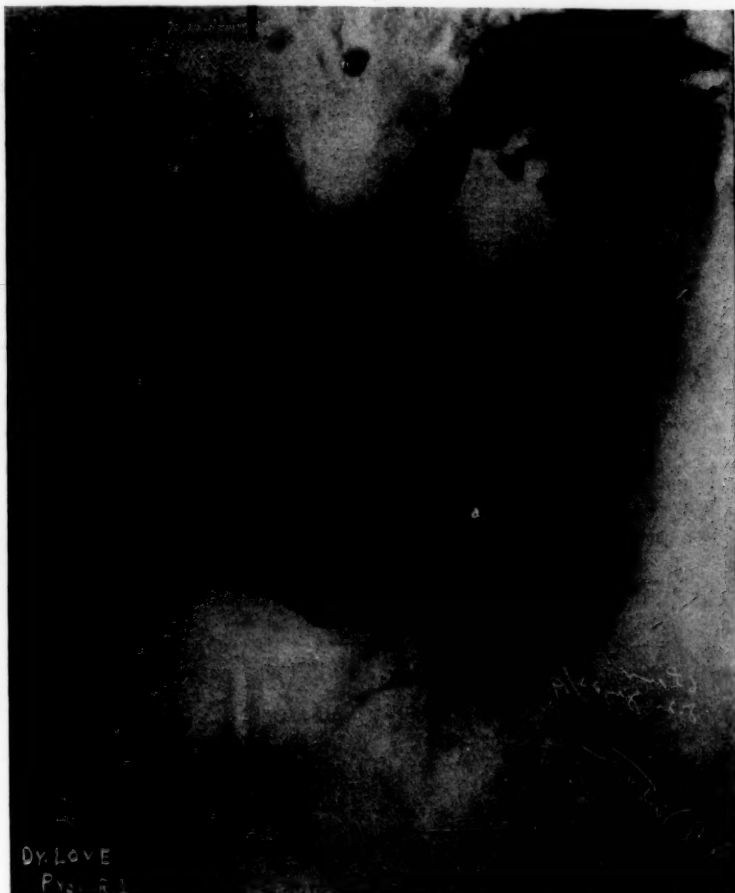


PLATE IV.

males as in females and are seldom found in patients under thirty years of age. Constipation and obesity are thought by some to be predisposing factors.

The symptoms and sequelae of diverticulitis resemble those of appendicitis with the exception that the local manifestations are in the left

confined to the left lower quadrant of the abdomen, or along the course of the colon. We find tenderness on pressure and a feeling of resistance by palpation and in many instances a mass can be felt. Vesical tenesmus and frequency of micturition may accompany the other symptoms.

The acute disturbance may subside in a few days or progress until we have a localized peritonitis, perforation, abscess formation and fistula. The symptomatology of diverticulitis is usually quite characteristic. Failure of recog-

eases, luetic growths, and pelvic inflammatory diseases in women. Many cases of cures following removal of supposedly malignant growths of the sigmoid were undoubtedly instances of diverticulitis. The microscope may be the only



PLATE V.

nition is due not so much to the absence of well defined symptoms and signs as to the fact that the subject is one the surgical significance of which is not duly appreciated by the medical profession.

Diverticulitis of the colon should be differentiated from malignant, and tuberculous dis-

means of determining, in certain cases, the correct diagnosis. Diverticulitis has more often been mistaken for malignancy than any other disease. The presence of blood in the stools is an important diagnostic sign in favor of carcinoma.

The value of roentgenological examinations

cannot be overestimated, as it has proved of the greatest assistance in differentiating between malignancy and diverticulitis. The radiogram may give the first intimation of the presence of diverticula of the colon. We should bear in

tage on the second or third day following the barium meal; some show best when the plate is made following a barium enema.

It is desirable to resort to stereoscopic roentgenograms as well as screen and plate examin-

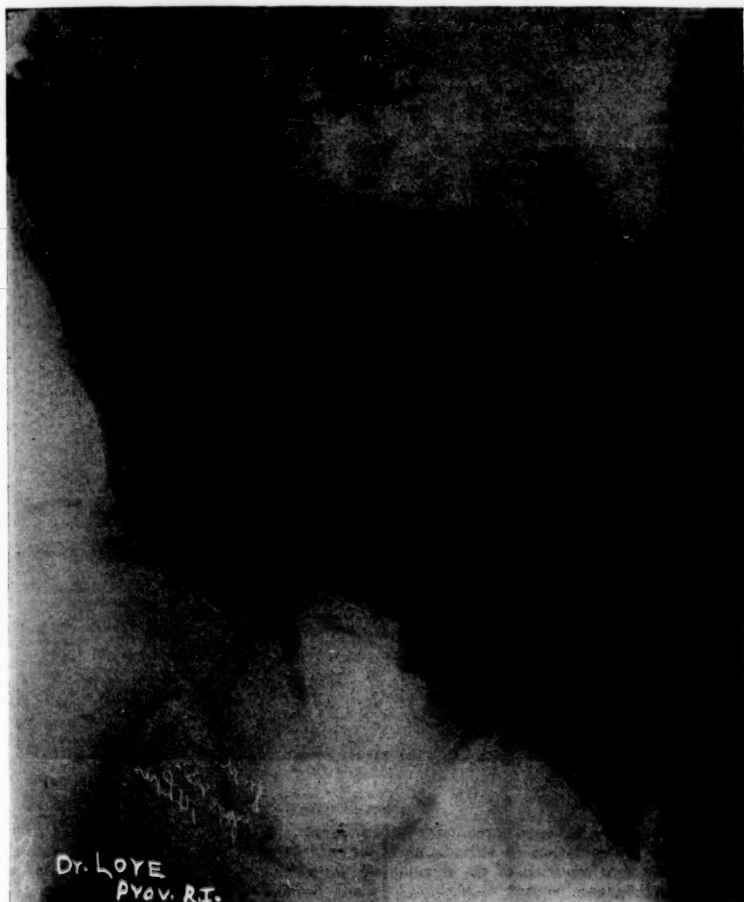


PLATE VI.

mind that we may have both malignancy and diverticulitis present in the same patient. When diverticula are present, the findings, after an opaque meal has been given, show small, rounded shadows outside of the colon; these are shadows of the opaque fluid retained in the diverticulum. They can be seen to best advan-

ations at various angles of observation. A liquid enema may be found of more value than the opaque meal. Should a diverticulum be filled with a fecal concretion or the inlet to the diverticulum be small, it may be impossible for the opaque fluid to enter the interior of the diverticulum.

About 60 per cent. of the cases of diverticula are followed by infection and serious sequelae. The treatment consists in a diet that leaves but little residue, free bowel evacuations aided by colonic irrigations, and, failing these, surgical intervention. Abscesses should be incised and drained and if the diverticulum can be readily found, it should be removed and the opening in the colon closed with sutures.

Conservative surgery is the keynote; we should not attempt too much in the presence of infection.

tending from four to six inches above the suture line in the colon and beyond the anus, may be passed into the bowel, to guide the feces from above the site of the sutures which unite the severed ends of the colon and to serve as a splint to keep the bowel at rest while union is taking place.

The Balfour tube has been of decided value in operations upon the sigmoid and rectum as well as other portions of the colon.

It may be desirable to perform a Miknliez operation in two or three stages and in many

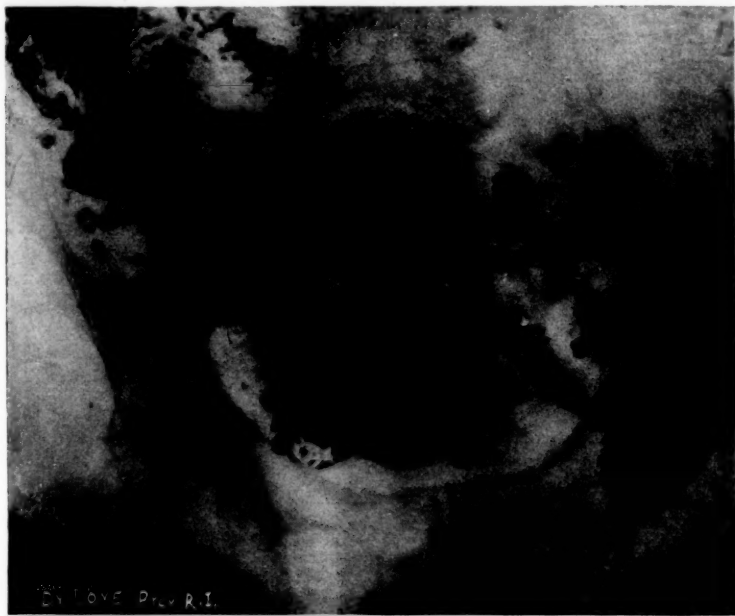


PLATE VII.

Colostomy above the diseased areas in the colon allows the inflammation to subside and may render subsequent resection of the sigmoid easier of accomplishment.

Each patient with diverticulitis presents a separate problem. Some will get well without operation, while some recover by drainage of an abscess or removal of a single diverticulum. Resection of a portion of the colon may be necessary and we may perform an immediate end-to-end, end-to-side, lateral anastomosis or a two or three stage Miknliez operation.

As suggested by Balfour, in performing an end-to-end anastomosis, a large rubber tube ex-

instances it is the safest operation; as in obese patients, there is apt to be leakage at the line of suture near the leaves of the mesentery, when an end-to-end operation has been performed.

The most prominent symptoms of a sigmoidovesical fistula are pneumaturia and passage of fecal matter and undigested food particles through the urethra. The urine is cloudy and we have a cystitis with pus and colon bacilli present.

Cystoscopy is frequently of great value, yet one may fail to find the opening in the bladder. Irrigation of the bladder with a solution of

aluminum acetate may assist in relieving the cystitis after the fistula has been removed and the bladder repaired.

#### SUMMARY

The symptoms and sequelae of diverticulitis resemble those of appendicitis with local manifestations in the left iliac region. Roentgenological examination is of the utmost importance in the diagnosis of diverticula.

Carcinomatous, tuberculous, luetic disease and pelvic inflammatory conditions in women should be distinguished from diverticulitis. Cystoscopy may sometimes, though not always, disclose a sigmoido-vesical fistula.

In the presence of infection too ambitious surgical intervention is to be avoided.

As in other surgical conditions, so also here, the least radical surgical procedure, consistent with the removal of the disease, will conserve the greatest number of lives.

#### DISCUSSION

DR. CUNNINGHAM, Boston: The subject of entero-vesical communications is always of interest, as the diagnosis of the primary cause of the communication is often in doubt and only revealed at operation.

I recollect a young lady of thirty-nine years of age, referred by Dr. David Eldridge, February 7, 1915, and in which case I believed the entero-vesical communication to be most probably from a diverticulitis. The patient had always enjoyed excellent health except for occasional periods of constipation, and fever. February 3, 1915, she became unwell and the day following noticed that she passed gas from her bladder during micturition. The day following the patient passed gas and some formed faecal matter mixed with the urine. Dr. Eldridge was called and found that the patient's urine contained faecal matter, considerable blood, and some pus. She was given a laxative, which increased the amount of faecal matter in the urine. On February 13, ten days after the onset, I made an ether examination.

The patient was small, but fairly nourished. An irregular fibroid of uterus of considerable size could be palpated through the abdominal wall. This was more clearly felt in a bimanual examination. The proctoscope passed for a distance of sixteen inches failed to reveal the opening into the rectum.

A cystoscopic examination showed the communication within the bladder to be located about two inches above and slightly to the left of the left urethral orifice. The area about the fistula was irregular, slightly elevated, indurated, and about the size of a twenty-five cent piece. The remaining portion of the bladder showed acute cystitis. A solution of methylene

blue was injected into the bladder and was found to escape into the rectum, but at a point above the end of the proctoscope.

At operation the sigmoid was observed winding around the left side of the fibroid mass and attached to the posterior surface of the bladder about two inches to the left of the median line. The omentum was adherent to the posterior surface of the bladder and fibroid uterus. This was freed and a hysterectomy was performed. The uterus contained multiple fibroids and was irregularly the size of an average grapefruit. The intestines could then be more carefully examined. It was found that there was an indurated area chiefly on the intestinal side of the junction, and was then considered adeno-carcinoma, as the pathological examination proved it to be. This indurated area formed a mass involving about one-half the circumference of the sigmoid, which was slightly dilated and continuous as a ring-shaped mass in the bladder wall, the bladder infiltration being of a lesser extent than in the intestinal wall.

A clamp was placed on the bladder so as to include the wall well beyond the indurated area; and this portion of the bladder was cut away, thus freeing the sigmoid, with the resected portion of the bladder attached. The cut bladder walls were sutured with the clamp still in position by a running catgut suture. The clamp was then removed and another running catgut suture placed so as to enfold the cut edges. The sigmoid could then be freely drawn out of the wound. Clamps were placed two inches beyond either side of the indurated area and this portion of the sigmoid was removed, together with a V-shaped piece of the mesentery. An end-to-end anastomosis was done. No nodes could be palpated in the mesentery, liver, or pelvis. A drain was placed to the anastomotic area through a stab wound. The abdominal wound was closed and a self-retaining catheter placed in the bladder. Pathological examination of the specimen showed adeno-carcinoma of the sigmoid and bladder, primary in the sigmoid.

The patient made an uneventful recovery, and left the hospital in twenty days in excellent condition, but with a moderate cystitis. She died about two years later from metastases.

DR. A. L. CHUTE, Boston: I have been interested in this subject of diverticulitis of the sigmoid for quite a number of years and have had the opportunity of seeing several such cases. In a paper that I read on this subject in 1911 I described some cases that opened into the bladder. I remember very well the first case I ever saw, which was with the late Dr. Maurice Richardson: in that patient starch cells were found in the urine and a fistula was recognized by means of cystoscopy. Dr. Richardson operated upon this man twice but the

outcome was not satisfactory. A short time later I saw a man who was passing gas and strawberry seeds with his urine. Cystoscopy showed me the place where the fistula opened into the bladder and I operated on the patient and closed the fistula. There was, however, some pocketing deep in the pelvis and this man died of sepsis. My only successful operative case occurred in a stout man of 50, whom I saw some years ago and who had an interesting history. For years this man had had discomfort in his left side, low down, which he believed was the result of a urethritis which he had had when he was very young and concerning which he was very much ashamed. A few days before I saw him, while on a train, he had been seized with great frequency and tenesmus. When he reached his destination it was found that in spite of his constant desire to void his bladder was empty. It was supposed that he had an anuria of unknown cause and after a few days he was brought home. After some study I found that he had a communication between his bladder and his sigmoid and that his supposed "anuria" was due to the fact that all his urine from his bladder was going into the sigmoid. I operated upon this man and after great difficulty closed his fistula. He made a very slow but good recovery and was perfectly well seven years after operation.

In connection with this subject I would like to call attention to the small non-perforating diverticula of the lower end of the sigmoid that occasionally give symptoms that are supposed to be due to prostatic changes. On some occasions the prostate has even been taken out without relief to symptoms. Several patients of this sort that I have sent to Dr. Morrison for radiographs have had relief from the barium enemas which they have received. These enemas evidently fill the diverticula and probably more or less sterilize them; at any rate the patients get relief from their symptoms and two patients whom I can think of now use the barium enemas more or less regularly. I think this

condition is more common than we recognize and accounts for some instances of vague discomfort referred to the general region of the prostate and rectum.

DR. R. C. GRAVES, Boston: I remember two interesting cases of diverticulitis with sigmoid-vesical fistulae in which the barium enema was valuable apart from its radiographic feature. In both there was pneumaturia with extreme colon-bacillus cystitis, but with no actual faecal material in the urine. The bladder openings were very small, and difficult to prove cystoscopically. The diagnosis was confirmed by the barium. For, shortly after the enema in each case, the patient voided large amounts of barium in the urine.

DR. R. F. O'NEIL, Boston: I have been much interested in hearing Dr. Keefe's paper. The few cases of this condition which I have seen operated on have resulted fatally from peritonitis. It seems to me his suggestion of draining first by a colostomy before attempting the separation of the bladder from the intestine and the closure of the fistula in each, is of great value. I think some of the fatalities have resulted from attempting too much.

DR. AUGUSTUS RILEY, Boston: In regards to giving Barium enemas; I remember seeing a case at the Boston City Hospital a short time ago. I operated on this case as one of an emergency. The case was a very obese man, who had an extensive diverticulitis; he had been in the medical wards for observation and it was thought a short time before operation that he had developed an intestinal obstruction. A Barium enema was given, and allowed to run in slowly without undue pressure. The patient became extremely ill in a short time, and was taken to the operating floor. A laparotomy was done; Barium mixture was found in the peritoneal cavity. The descending colon from the upper rectum to near the splenic flexure was ruptured.

## ORIGINAL ARTICLES

### INFECTIOUS MUSCULAR EROSION. AN END RESULT IN THE LUMBAR REGION\*

BY MAST WOLFSON, M.D.; X-RAY DISCUSSION: BY LLOYD BRYAN, M.D.

#### INTRODUCTION

CASES are few and far between where infections cause herniation of the large bowel through muscular erosion. The diagnosis is very difficult without the aid of radiography.

\*From the Dr. C. G. Levison Surgical Service—Mount Zion Hospital, San Francisco, California.

The following is a case that is very interesting from many standpoints and through which one may learn much in retrospect.

#### EARLY HISTORY

Mrs. S., age 38, married, first entered Mt. Zion Hospital with a complaint of pain in the

right lower quadrant and in the right leg, May 11, 1920.

Her family history is negative, her past history important only in that she had had a Caesarian section 7 years previous, and one month previous, a hemorrhoidectomy, tracheorrhaphy, anterior and posterior colpoplasty with good results and rapid recovery.

At that time, she entered with a complaint of pain in the right lower quadrant, she remained in the hospital for a period of three months during which time, she ran a low grade septic temperature, with daily upward swing which on one occasion rose to 39.4. She was finally discharged with a main diagnosis of hysteria based on the pathology of post operative adhesions. X-rays of kidneys, bladder and fluoroscopy of G. I. Tract were negative at that time. Blood examination and urinalysis were negative.

The patient again entered the hospital on August 30, 1920, and February 14, 1921, with practically the same complaints of pain in the right lower quadrant. On these occasions she also began to complain of pain over the lower right lumbar region with an area of extreme hypersensitivity to slightest pressure over the right iliac crest. She was again dismissed with the main diagnosis of neurasthenia; but on returning home she remained in bed, complaining of increasing severity of her symptoms. It was not until March of 1921, that on returning to the hospital with the same complaint, that a tender swollen mass was noted in the right lumbar region, extending posteriorly to the spine and anteriorly to the right mid-axillary line. She was taken to surgery and under general anaesthesia the mass was opened, showing a deep seated abscess in the right lower lumbar muscles and under the iliac crest, which yielded about a pint of foul smelling blood, degenerated tissue and pus. Examination of material from the abscess showed many gram negative intercellular diplococci. No evidence of the. X-ray of the spine and pelvis taken two months later were negative.

From March 1921 to June 1922, the patient gives a history of recurrence of the abscess which was aspirated on two occasions and incised on one occasion (June 1, 1921). An interesting fact is noted that the laboratory report April 14, 1921, which on previous occasions had shown, non-hemol-strep, gram negative, diplococci and B. Coli, was positive for the tbe, after guinea pig inoculation. From June 1922, until Jan. 1925, the patient was not seen at this hospital but states that she has always been in poor health during that time, her main complaint being that of pain in the right hip. She states, "that the mass over her right hip has come into prominence a number of times, and would again subside without treatment."

On January 13, 1925, she again entered the

hospital for incision and drainage, of the abscess, remaining in the hospital about one month. X-rays of spine and pelvis taken at that time were again negative.

#### PRESENT HISTORY

Her present entry May 6, 1925, was for the complaint of pain in the right lower quadrant and over the right iliac crest. She had never



really been free of these symptoms since her last discharge from the hospital February 9, 1925. Her family and past history are negative. Her physical examination was essentially negative as far as her present condition is concerned except for the Surgical Condition which was as follows:

With the patient in an up-right position there

is a large mass 9 cms. in diameter, located over the right iliac crest, which is slightly, but not markedly tender to pressure. The mass was soft, fluctuant, and there was no sign of muscle guarding over the area. In palpating the mass, it was found that slight pressure would cause it to entirely disappear to return immediately on release, especially if the patient would strain or cough. There was also slight but definite muscle guarding over the right lower quadrant. (See Plate No. I.)

Based on the patient's history and positive findings a diagnosis of hernia of the colon was made, which was later confirmed by Barium

distally, over the right iliac crest. After going through the sub-cutaneous tissues and fat, the sac of a large hernia was demonstrated, which was bound to the adjoining tissues with adhesions and was covered by a flap of fascia which had been eroded through by the old abscess. No muscles could be demonstrated until after the sac of the hernia was dissected free of the adjoining tissues down to the hernial opening which was directly over the right iliac crest and was about 4" in diameter, this also revealed the remains of an old perforated retro-cecal appendix. The appendix was at least 8" in length very much injected, thickened and at the tip



enema and X-ray. Dr. Bryan states: "Roentgen examination of Mrs. S. with an opaque meal showed the descending colon and the sigmoid to be displaced slightly to the right. Injection of the colon with an opaque media showed the ascending colon and cecum extending through the lumbar muscles posteriorly into a large hernial sac. There was no roentgen evidence of pathology in the spine." (See Plate No. II.)

#### OPERATIVE PROCEDURE

On June 1, 1925, patient was sent to Surgery when the following operation was performed by Dr. Levison. *Procedure:* A large semi-circular incision was made with diameter of about 10" with the curve of the incision pointing

there was a large abscess about the size of a walnut which had been walled off and had formed adhesions at the crest of the ileum. The adhesions were freed by sharp dissection and in doing this the abscess was accidentally incised and a small amount of pus which did not have the odor of colon pus escaped. After clamping the meso appendix, the appendix was removed in the usual manner. The stump was inverted by two layers of Pagenstecher and the opening through which the appendix had ruptured was closed with a mattress suture of No. 2 chr. e.g. Following this the sac of the hernia was inverted by means of four layers of mattress sutures beginning from the tip of the sac and working toward the base, each time inverting as much of the sac as possible. The hernial opening in the

muscles which was located just above the iliac crest and as stated before was about 4" in diameter was defined. This opening was closed by means of 4 mattress sutures which caught the muscles on all sides, and was reinforced by passing silver wires through skin, sub-cutaneous tissues, fascia and muscle; four such wire sutures were laid—two anterior-posteriorly and two from above downward. After these sutures had been drawn taut and fastened with shot, the fat in the incision was approximated with a few interrupted sutures. Following this the sac was closed with interrupted sutures of silk. A few skin clips closed the skin incision. Three Penrose tubes were inserted in the wound. The patient left the table in good condition. (See Plate No. III.)



#### POST-OPERATIVE NOTES

After the operation the course in the hospital was relatively uneventful.

Infection was demonstrated in the wound at the end of a week. A culture sent to the laboratory came back with the report of staphylococcus albus. Hot compresses were applied, followed by disappearance of the infection with return of normal temperature.

The wires were removed 24 days after operation. There was no evidence of a recurrence of the hernia on straining or coughing.

The patient was allowed to get up five weeks after operation at which time she was perfectly comfortable. There was no objective evidence of hernia.

#### REMARKS

The interest in this rare case is its diagnosis and retrospect. Certainly a diagnosis of an appendicitis was not made in 1920 although it was thought of by reason of the various examinations made. The case shows also what sequelae

an appendix abscess undiagnosed may lead to. Nowadays the dictum, "to operate on a pathological appendix at once" is an excellent one, and has stood the test of time. Why wait?

The statements of the patient that the mass disappeared at times were taken into consideration but on examination it seemed more like an abscess than bowel—it was fluid—not gaseous. X-rays were taken but were negative for osteomyelitic changes in adjacent structures. A barium enema and meal revealed the true pathology which Dr. Bryan has discussed.

In looking up the literature on similar cases one is struck by the absence of reported ones. Two cases were observed by Dr. Wm. Osler, when he was visiting cases in Toronto, in his student days with Dr. Howard Anderson, twenty years before appendicitis was a clinical entity. In each case the appendicitis was undiagnosed and an abscess resulted, each in due time breaking into the groin. Also in the old and late text books on hernias this condition is not discussed to any consequence.

#### PATENT MEDICINE SCHEMES

THE Gray Advertising Agency, Kansas City, Mo., conducted by Messrs. Burgess, Johnson and Webb, was involved in a recent fraud order stopping the operations of about 27 patent medicine schemes. The Burgess, Johnson, Webb Corporation acted as holding Company and was interested in:

Dale Laboratories—Promoting Virex, a worthless treatment for deafness.

Webb Chemical Co.—Promoting Webb Combination Prescription for asthma by false and fraudulent claims.

Warren Laboratories—Promoting Clear Pex for eczema.

Hilton Laboratories—Promoting Hilton Vitamines, supposedly a body builder.

Kings Laboratories—Promoting Kings Combined Pyorrhea Treatment.

The Associated Health Institutions, another scheme of these promoters, sent out so-called *cut price* lists. At the time the fraud order was issued the concerns were receiving 1600 pieces of mail daily. Among the fraudulent practices was the use of false testimonials and photographs.

#### ASTHMA CURE SCHEME

The Asthma-Tab Laboratories, Kansas City, Mo., represented that its preparation, Asthma-Tabs, would kill asthma and hay fever germs in three days. These and many other claims were found to be false and fraudulent and a Postal Fraud order issued. The concern slightly modified their literature, changed the name to Asthma Tabs Inc. and started up again. An additional fraud order was recently issued to include this new company.—*Bulletin Boston Better Business Commission.*

**Case Records**  
of the  
**Massachusetts General Hospital**

ANTE-MORTEM AND POST-MORTEM RECORDS AS USED IN  
WEEKLY CLINICO-PATHOLOGICAL EXERCISES

EDITED BY  
**RICHARD C. CABOT, M.D., AND HUGH CABOT, M.D.**  
F. M. PAINTER, A.B., ASSISTANT EDITOR

CASE 12131

MEDICAL DEPARTMENT

An American tinsmith seventy-two years old entered January 7. The chief complaints were dyspnea, orthopnea, and weakness of four weeks' duration. He entered semistuporous and died fourteen hours later. The scanty history given is probably not very reliable.

For years he had urinated three or four times at night and had had high blood pressure. Four weeks before admission while returning from work he fainted. He managed to walk up three flights of stairs. He developed dyspnea, orthopnea and severe precordial pain for which he painted his entire front chest with iodine without relief. All the symptoms persisted, and swelling of the ankles and tenderness in the right hypochondrium developed. He began also to have nausea, severe vomiting and diarrhea. The frequency of urination increased to eight or twelve times by day and six to ten at night. For three weeks he had been in bed. He had become very weak and cyanotic. A physician gave him digitalis.

Examination showed a well nourished man, very dyspneic and cyanotic, with Cheyne-Stokes respiration. The chest showed an iodine burn. The cervical glands were slightly enlarged. The apex impulse of the heart was in the fifth space. The left border of dullness was 12 cm. from the midsternal line, 3 cm. outside the mid-clavicular line, right border of dullness about 3.5 cm. to the right; supracardiac dullness 8 cm. The sounds were faint. There was a systolic murmur at the apex. The pulses were of poor volume and tension. The radials were palpable. The temporals and brachials were tortuous. The blood pressure was 122/100. The chest expansion was reduced. The right lower chest showed an area of flatness in the axilla and posteriorly, with diminished tactile fremitus and breath sounds. There were rales over both lungs posteriorly. The abdomen showed slight dullness in the flanks. The liver dullness extended from the fifth rib to three fingerbreadths below the costal margin, where the edge was felt. There was inguinal hernia. The ankles showed slight pitting edema. The pupils were small (morphism) but apparently reacted to light and distance.

The amount of urine is not recorded. The specific gravity was 1.026; a trace of albumin; 2-4 leucocytes per high power field. The blood showed 8,920 leucocytes, 83 per cent. polynuclears, hemoglobin 60 per cent., reds 4,864,000, with some achromia, slight anisocytosis and poikilocytosis. A Wassermann was negative. The non-protein nitrogen was 46 mgm. per 100 c.c.

The temperature was 99.9° to 98.4°, the pulse 182 to 92, the respiration 47 to 29.

The patient was put to bed and given digifolin intramuscularly and morphia; later caffeine. Venous section was considered but was not done because of the Cheyne-Stokes respiration and because the exact renal condition could not be determined.

Early the morning following admission the patient died.

DISCUSSION

BY WILLIAM H. SMITH, M.D.

"Dyspnea and orthopnea at seventy-two of four weeks' duration, associated with weakness." Our attention is at once attracted to the underlying possible pathology for cardiac disease.

The frequent urination at night in a man of seventy-two might be attributed to changes in the prostate, or might be the manifestation of changes in the kidney associated with arteriosclerosis, high blood pressure, or a chronic interstitial nephritis.

His fainting four weeks before admission suggests weakening of the heart muscle.

Three flights of stairs once or twice daily is not a good prescription for an arteriosclerotic seventy-two years of age.

The statement that he developed dyspnea, orthopnea, and severe precordial pain for which he painted his entire front chest with iodine without relief is probably the essential factor in the diagnosis of the case.

Angina pectoris based on an arteriosclerotic background with a degenerative change of the heart muscle due to faulty circulation is certainly within the range of possibility. The most important single point in the differential diagnosis between angina pectoris and coronary occlusion is left out. Angina pectoris is usually of short duration, but when the coronary has become occluded the duration of the angina may be hours and require two or three hypodermics of a quarter of a grain of morphia without, even with this dosage, adequate relief of the pain. The persistence of the symptoms suggests there was more than simple angina pectoris and favors the underlying diagnosis of coronary occlusion; the epigastric pain, or hypochondrium pain, might well be due to back pressure in the liver.

The nausea, vomiting, and diarrhea may have

been due to treatment, may have been secondary to the cardiac condition, that is a passive congestion, or hidden in the background there may be an underlying nephritis either of arteriosclerotic origin or associated with a blocking due to prostate.

The increasing urination by day and night suggests a prostatic irritation, if not prostatic hypertrophy.

The progress of his condition despite rest in bed and treatment has been downward.

Examination shows the heart in the fifth space, three centimeters outside the midclavicular line. We certainly are face to face with no marked cardiac enlargement either due to hypertrophy or dilatation. I prefer hypertrophy of the heart in a patient with angina pectoris because it presupposes an adequate coronary circulation to give nourishment, which favors hypertrophy. The supracardiac dullness of eight centimeters is consistent with the senile arch. The heart sounds were faint, suggesting weakening of the heart muscle. An adequate explanation, if we assume coronary occlusion, would be malnutrition of the heart muscle with beginning myomalacia cordis. The presence of a pericardial friction rub would have made almost conclusive the diagnosis of coronary occlusion. When nourishment of the heart muscle is not obtainable in adequate amount, and the muscle is dying, nature will attempt to protect this muscle from rupture by throwing a pericardial exudate over the degenerative patch. In my experience this pericardial rub in coronary occlusion cases usually appears in about forty-eight to seventy-two hours. There is usually an associated weakening of the heart sounds, falling of the blood pressure, increase in the heart rate, sometimes increase in the size of the heart, and dilatation due to the weakening muscle.

The systolic murmur at the apex could be explained by a relative insufficiency of the mitral valve. The pulses were of poor volume and tension, suggesting that there has been a fall in the pressure, although we have no adequate observation as to any previous increase of blood pressure.

The dullness at the right lower chest with flatness and diminished tactile fremitus and breath sounds suggests a collection of fluid. We assume it to be a hydrothorax, in the absence of any definite evidence to suggest infection, pneumonia, with a consequent empyema.

The dullness in the flanks would be consistent with weakening of the heart muscle,—passive congestion, ascites.

The palpable liver might be due to laxity or it might be due to congestion associated with a heart condition.

The specific gravity of 1.026 is inconsistent with a chronic nephritis, and I shall be very much surprised if the renal element in the case

is of much import. Certainly in my own experience it is the exceptional case where arteriosclerosis plays any more than a degenerative place in the kidney conditions associated with this disease. Uremia is so rare in the absence of prostatic obstruction that clinically I have long since ceased to look for it. Although the white count showed no increase, it is interesting that eighty-eight per cent. were polymorphonuclears. There is a slight anemia, but it is very common in elderly people with arteriosclerosis to find such an anemia.

The negative Wassermann we accept.

The relative slight increase in the non-protein nitrogen further strengthens our belief that the kidney may show arteriosclerotic degeneration, but there will be no true nephritis in the case.

The slight elevation in temperature is consistent with coronary blocking, the pulse with weakening of the myocardium, and the increased respiration with insufficiency of the heart.

The only absolute diagnosis would be arteriosclerosis with weakening of the heart muscle. The angina pectoris, if of long duration, makes the presumptive evidence of coronary occlusion absolute. I believe we shall find a dying myocardium, due to malnutrition, due to coronary occlusion, due to arteriosclerosis.

It is in this type of case one is on the lookout for embolic infarction, especially of the brain, because the mural thrombus which is erected in the ventricle over the degenerated myocardial area furnishes adequate material for these emboli. In elderly people with acute abdominal pain it is often wise to exclude the possibility of coronary occlusion by a careful history, because it is possible for an embolus to block one of the mesenteric vessels from these mural thrombi.

#### CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Arteriosclerosis.  
Arteriosclerotic and hypertensive heart disease.  
Congestive failure.

#### DR. WILLIAM H. SMITH'S DIAGNOSIS

Arteriosclerosis.  
Angina pectoris.  
Coronary occlusion?  
Possible arteriosclerotic degeneration of the kidneys.

#### ANATOMICAL DIAGNOSIS

##### 1. Primary fatal lesions

Arteriosclerosis.  
Arteriosclerotic occlusion of the right coronary artery.

##### 2. Secondary or terminal lesions

Fibrous myocarditis.  
Mural thrombi of left ventricle and right auricle.

- Hypertrophy and dilatation of the heart.
- Chronic passive congestion.
- Slight hydropericardium.
- Hydrothorax, right.
- Ascites.
- Infarcts of lungs and spleen.
- Compression atelectasis of the lower lobe of the right lung.
- Embolie thrombosis of small branches of the pulmonary artery leading to the infarcts.

### 3. Historical landmarks

Slight chronic pleuritis, right.

DR. RICHARDSON: He was fairly nourished. The skin generally was loose and the subcutaneous tissues flabby, as though weight had been lost.

The head was not examined.

Trunk: The face and neck were dusky. There was a small amount of subcutaneous fat and the muscles were dark colored and rather soft.

The peritoneal cavity contained about 1000 c.c. of thin pale clear fluid.

The appendix was long and slender, rested retroceally and the distal end reached nearly to the gall-bladder. On section it was negative.

The gastro-intestinal tract showed well marked chronic passive congestion.

The liver was 8 cm. below the costal border in the right mammillary line. The diaphragm on the right was at the fourth rib, on the left at the fourth interspace.

The right pleural cavity contained about 2,000 c.c. of thin pale clear fluid. The left cavity contained a few cubic centimeters of similar fluid.

Pleural adhesions: Right, a few at the apex, elsewhere free. Left, none.

The trachea and bronchi contained a small amount of thin reddish frothy fluid. The bronchial glands were slightly enlarged, pigmented, negative.

The lung tissue generally showed chronic passive congestion. In the lower part of the right upper lobe there was an infarct  $2\frac{1}{2}$  cm. across, and in the upper lobe of the left lung near the root there was another small infarct.

The pericardium contained 100 c.c. of thin pale clear fluid. The heart weighed 428 grams, moderately enlarged for him. The myocardium generally was of fair consistence and pale brown-red, but in the region of the anterior half of the wall of the left ventricle there were a few small areas of fibrous myocarditis and in the posterior half of the wall there were numerous areas of fibrosis with much thinning of the wall. The endocardium opposite this region, about midway, showed frank adhering thrombotic masses up to  $2\frac{1}{2}$  cm. across. There was another one in the apical region  $2\frac{1}{2}$  cm. across. In the region of the tip of the right auricle

there was another frank mural thrombus 2 cm. across. The left auricle was negative. The right ventricle wall was 3 mm. thick and the left ventricle wall 12 mm. thick except in the region of the myocarditis, where the wall was 3.5 mm. thick. The ovale was closed. The cavities on the left showed slight dilatation, on the right much dilatation. The valves were negative. The left coronary was free but showed a moderate amount of fibrous sclerosis scattered along its wall. The right coronary at a point 2 cm. from its origin presented marked fibrous and fibrocalcereous sclerosis with practical occlusion of the artery at this point. Beyond this the artery was free, but showed some fibrous sclerosis.

Aorta. The ascending thoracic showed a slight amount of fibrous sclerosis. The arch, descending thoracic and abdominal portions showed a moderate amount of fibrous sclerosis with scattered fibrocalcereous areas. The great branches showed a slight amount of fibrous sclerosis.

The pulmonary artery was negative except that in the small branches which led to the infarcts there were occluded plugs the source of which was the mural thrombus in the right auricle.

The liver showed typical nutmeg markings,—chronic passive congestion. The spleen showed chronic passive congestion and a small frank infarct, the source being the mural thrombi in the left ventricle.

The kidneys combined weighed 264 grams. The capsules stripped. The surfaces were smooth, brown-red, and the cortex measured 5 mm. The tissues showed chronic passive congestion. There was a small hydrocele on each side. The left inguinal canal admitted three fingers, but at the time of necropsy the canal was free.

A case then of arteriosclerosis with arteriosclerotic occlusion of the right coronary artery, fibrous myocarditis, thrombosis, infarcts, etc.

## CASE 12132

### SURGICAL DEPARTMENT

An American farmer forty-two years old was referred to the Baptist Hospital January 5 with a questioned diagnosis of peptic ulcer based on the vomiting of blood. He himself was so short of memory and so hazy mentally that the history came mostly from his wife.

He had been having headache for about two months. After the operation he recalled that the last of September he was knocked down and his head injured. He felt that his symptoms really began then. December 12 some operation on the nose was done to relieve the headache. It did not. On December 28 a second operation was done, consisting of partial turbinectomy.

tony. He grew worse instead of better, and three days later vomited some blood.

Examination at the Baptist Hospital showed nothing abnormal other than his very hazy mentality and short memory. X-rays of the gastrointestinal tract were negative. The reflexes showed no abnormality. Spinal puncture showed normal dynamics and a fluid which showed no change from normal. The patient grew steadily and rather rapidly worse, with increasing drowsiness and loss of strength.

In view of the nose operations it was thought that he might have an extension of the infection into the left frontal lobe, and exploratory operation based on that hypothesis was done. The left frontal sinus was not normal, but did not contain pus. A trephine opening was made over the left frontal region and about six ounces of bloody fluid was evacuated.

Following the operation the symptoms were immediately and very strikingly relieved. Some days after the operation he became aware of an unpleasant odor in the left side of his nasal cavity at times. He found it a strain to carry on a sustained conversation, though he was quite garrulous on his own subjects. Then he found that when he was tired he used the wrong word, immediately recognizing his mistake but unable to correct it. The condition progressed until he slurred the final phrase of any long sentence and many shorter phrases. He rarely made a misstatement however. He could not hold a thought very long and could not add or subtract seven. About March 5 he began to lose sensation in his right arm. This condition became more marked until at admission to the Massachusetts General Hospital March 12 he could not differentiate between sharp and dull and could not use the arm. He also lost strength. He had no more headache, but had occasional tingling. He often had periods of diplopia lasting a few seconds.

At this hospital he gave an additional past history of scarlet fever in childhood, catarrh "always", and slight cough, sometimes productive.

Examination showed a poorly developed and nourished man. Both sclerae were slightly injected, the right more than the left. The teeth were false. The spine showed marked double curvature. The motion of the entire spine was poor. The heart, lungs, abdomen and genitals were normal. Neurological examination showed slight tenderness on tapping over the scar of the operative wound in the left frontal region; only a little loss of sensation in this region. He was unable to recognize the odor of camphor or vanilla. His vision had failed slightly since his operation. He thought he had had some flashes of light in his eyes several times since the operation, but was not sure. He was able to read newspaper print very slowly and falteringly but not always calling the word as

it was. He had had diplopia a number of times in the past week or two. His eyes followed the movements of the fingers normally. The pupils reacted well to light, poorly to accommodation. The motor function of the masseters and temporals was normal. The finger-to-nose test was very poorly carried out on the right, probably largely because of weakness of the right hand. There was definite motor weakness of the right arm. He said there was some weakness of both legs when he walked. There was sensory disturbance apparently affecting to some extent the entire right side of the body. He made numerous mistakes in telling the position of the toes and fingers on the right; none concerning those on the left. There was questionable astereognosis on the right. There were occasional hallucinations of sight, of smell and of light. There was adiadokokinesia in the hands due to paresis of the right arm. The knee-jerks, biceps and triceps reflexes were equally normal. The hypogastric, epigastric and scrotal reflexes were definitely diminished on the right. Gordon, Babinski and Oppenheim were negative on both sides.

Before operation the temperature was 97.6° to 100°, the pulse 60 to 95, the respiration normal. The urine was normal. The blood showed 6,000 leucocytes, 78 per cent. polynuclears, 4,990,000 reds, 90 per cent. hemoglobin, slight achromia, platelets increased. Wassermann negative. X-ray report: "In the left frontal region there is a rounded area of diminished density which suggests an area of bone destruction. Has the patient been operated upon? The calvarium is of normal thickness. No definite changes present which suggest increased pressure. Sella turcica does not appear abnormal. No definite erosion of the clinoids. Sphenoidal sinus is very large. Calcification in the region of the pineal."

March 19 operation was done. The patient did exceptionally well after it, and was very comfortable. On the third day he felt he could speak with more ease already. On the sixth day his right hand and arm were stronger than before the operation and he could talk and answer questions readily. April 5 he was discharged in excellent condition, talking with very slight hesitancy. Both arms seemed equally strong.

#### DISCUSSION

BY W. JASON MIXTER, M.D.

Was this first operation done here?

MISS PAINTER: No, that was done at the Baptist Hospital.

DR. MIXTER: The trephine opening was rather above the frontal sinuses.

Here we come to the first really striking findings in this case. This operation was done by Dr. Young and Dr. Harold Tobey. The fluid

was dark yellowish-red in color, and lay immediately beneath the dura. No brain tissue was seen at this operation.

The discussion of such a case as this should begin, I think, with the question of the history of injury. The history of injury to the head did not come out until after this patient had had his operation at the Baptist hospital on account of the fact that he was very hazy mentally. That injury however was undoubtedly of very considerable importance, although not much stress was laid upon it at first. Then came the operative findings of bloody fluid immediately beneath the dura over the frontal lobe. The question then should be brought up as to whether or not that fluid was really immediately beneath the dura or was encysted fluid rising from within the brain substance. At that operation the opening was too small to explore the brain and determine which condition obtained.

He was brought to this hospital with the idea of a more radical type of exploration, and our examination here showed that he had marked changes in motor power on the right side of the body, definite aphasia, and diminution of his skin reflexes on the right side. With the finding of a definite pathological condition in the vicinity of the frontal lobe and so much disturbance of the right side of the body a diagnosis of some intracranial pathology, either from trauma or from tumor, could be made without going through the more difficult and more dangerous types of investigation such as pneumoventriculography.

As the patient had been operated on previously these X-rays may be accepted as negative. The presence of a calcification in the pineal body brings up another diagnostic point which is worthy of mention here, namely the position of the pineal body within the skull. At that time we did not realize, or rather we had made no use of the fact, that in tumor of the cerebrum the pineal body is thrown toward the opposite side. We now know that in the presence of calcification of the pineal body we can take an anteroposterior X-ray and demonstrate this variation from the midline. That would have given us in this case an added diagnostic point which would have been of interest though hardly of very great value.

The pre-operative diagnosis, on the strength of the history and findings, it seems to me, should be cyst, either gliomatous or arachnoid, or subdural hemorrhage from the injury the September previous.

A PHYSICIAN: Why cyst instead of tumor?

DR. MIXTER: Because there was fluid present.

A PHYSICIAN: You mean on account of that pre-operative finding?

DR. MIXTER: Yes, we had that pre-operative finding. At that time we had heard no history

of that severe trauma the September previously. They may have had it at the Baptist Hospital, but we did not have it here.

DR. HOLMES: These X-rays do not show any suggestion of abscess.

DR. MIXTER: I do not think so.

DR. HOLMES: We did not have an antero-posterior view, did we?

MISS PAINTER: That is all there are.

DR. HOLMES: This does not show it.

DR. MIXTER: Dr. Holmes's suggestion of abscess as a possible diagnosis is a perfectly good one except for the fact that we already have evidence that it was not an abscess of the frontal lobe, because we had the evidence of the previous operation with removal of six ounces of bloody fluid from the vicinity of the frontal lobe. In abscess we should always find pus or brain directly we open the dura, and where the brain comes up against the opening we find pus by deeper exploration.

#### DR. MIXTER'S PRE-OPERATIVE DIAGNOSIS

Cyst of the frontal lobe?  
Subdural hemorrhage?

#### PRE-OPERATIVE DIAGNOSIS

Cyst of left frontal region.

#### OPERATION

Gas-ether. A large left osteoplastic flap was made in the temporo-frontal region. The dura was reflected, exposing an extensive mass of tissue covering the brain from the frontal region to the occipital pole, adherent to the brain in the vicinity of the motor area and at another point further back. It varied in thickness from nothing at the edges to 2.5 centimeters at the center. It was dissected out and removed. During the removal the cavity within this mass was ruptured, with the evacuation of a considerable amount of dark yellow-brown pus. There was some bleeding from the torn pial veins, controlled by muscle pack. A small subtemporal decompression was done below the bone flap. The dura was closed with silk and the scalp in layers. No drainage.

#### PATHOLOGICAL REPORT

A large flat piece of tissue measuring 6 by 11 cm. The outer surface is smooth. The inner has an elevated portion which occupies the greater part of its substance and runs into thin tissue at its periphery. This elevated portion contains a large spherical crater which measures 3 by 5 by 8 cm. Underlying this crater-like ulcer and corresponding to it in extent is a flat pocket or sac which is filled with a thin yellowish brown fluid and lined by a pale yellow membrane.

Microscopic examination shows a structure composed of fibroblasts with many blood ves-

sels. Their fibrils are separated by fluid and wandering cells, many of which contain hemosiderin. The central cavity is lined by wandering cells of various kinds. The histologic appearances are those of a chronic inflammatory process, and would seem to be consistent with an organization of pachymeningitis hemorrhagica interna with abscess formation, although the characteristic laminations of this process are lacking.

#### FURTHER DISCUSSION

DR. MIXTER: I think the operation explains itself—the large pancake-shaped mass of tissue, brown in color, thicker at the middle and fading off to practically nothing at the edges. The interesting part of the operation to me was the fact that there was no free fluid under the dura. This organized mass with a necrotic center presented, whereas at the previous operation there had been definitely fluid blood. The crater was the central necrotic area.

The subsequent history of this patient is interesting. He made an uneventful convalescence while at the hospital. Up to last summer he had been in excellent condition, but following some rather heavy work he had an epileptic convulsion. He has had three or four such convulsions since that time, always following heavy work, but so long as he goes along easily he is all right. He has no signs of increased intracranial tension or of any abnormal neurological findings.

A PHYSICIAN: Do you feel that this originated through a fracture of the skull?

DR. MIXTER: I think not. I think the hemorrhage originated from a torn pineal vein without fracture. That is not so uncommon as one would think.

A PHYSICIAN: Why would that give an evidence of infection?

DR. MIXTER: I do not believe he ever had an infection.

A PHYSICIAN: But he had some pus in this cavity according to the description.

DR. MIXTER: I refer to Dr. Richardson on that.

DR. OSCAR RICHARDSON: Dr. Hartwell used the term abscess cavity. To me that cavity suggested more a breaking down from lack of circulation than it did any real infection, and I think the proof of that is the fact that the man never showed any evidence of infection post-operative, although this material from the cavity was thoroughly spilled around the meninges. If he had had infection of any moment there he would probably have died of meningitis, because these extracerebral abscesses where the pus is freely spilled around in the meninges are almost invariably fatal.

A PHYSICIAN: There is a group of cases where we get cracks through the frontal sinus

and get a certain amount of air which forms an aerocele, and we get a low-grade infection which goes on for years.

DR. MIXTER: But that is pretty well pocketed off, whereas if we open the cavity freely and communicate that infection to the unprotected meninges, then we shall have a very rapid post-operative fatality. If we go into the cavity and drain it without getting into the general subdural arachnoid spaces, the patient gets well.

DR. RICHARDSON: He does not state definitely here that he finds pus. He says there are wandering cells of various kinds.

DR. MIXTER: He speaks of abscess formation. It seems to me that is probably more a question of an area of necrosis within the organizing blood clot rather than a real infection. I am not certain because I have no bacteriological report.

A PHYSICIAN: You must have been pretty well convinced that it was not infection at the operation, because you gave no drainage.

DR. MIXTER: Exactly.

A PHYSICIAN: I do not think the description here agrees with your findings.

DR. MIXTER: I do not think it does absolutely, because I felt pretty sure that there was no infection or else I should not have sewed him up tight.

The question of subdural hemorrhage from the pial veins is an interesting one. I have taken the matter up through the post-mortem findings in one or two cases, particularly one that I operated on and that later came to the hands of Dr. Magrath. In that particular instance the hemorrhage was apparently due to the tearing away of one of the large veins entering the longitudinal sinus by the weight of the brain when this patient sat down on a slippery sidewalk. There was no injury whatever to the skull. The woman was walking along on a slippery sidewalk, slipped, and sat down hard. She immediately had very severe pain in her head, became unconscious within a short period of time, with a slow pulse, and bloody cerebrospinal fluid by puncture. Operation revealed an extensive clot and she went on to fatal termination within a few days. Dr. Magrath demonstrated clot on both sides, probably from rupture of the veins in the vicinity of the motor cortex entering the longitudinal sinus, which shows that this type of injury may occur with comparatively slight trauma.

DR. RICHARDSON: This patient is having epileptic seizures now. Do you think he is still bleeding?

DR. MIXTER: No, I don't believe so. I think it is probably from scar in the motor cortex. I do not believe that any further operative interference is advisable, and I hope that these epileptic seizures can be controlled by luminal. They seem to be fairly well controlled by it at this time.

## NOTE BY DR. EDWARD L. YOUNG, JR.

I do not think I have anything essential to add to what is given in the history. We had had a case at the hospital under our care a short time previous to this one without any evidence that could be discovered by any one, including the neurological consultant, which proved at autopsy to be a subdural hemorrhage. Because a burnt child dreads the fire we were perhaps more willing to do something radical in this case.

In this case the patient was very rapidly getting worse and it seemed as though he would die unless something were done; and in spite of negative localizing findings by Dr. George Clymer, based on the only lead we had, that is the nasal operation, Dr. Tobey first went for the frontal sinus, and then he and I for the region of the frontal lobe, largely, as I have said, on the basis that something had to be done, and that was the most obvious thing.

## DIAGNOSIS

Pachymeningitis interna hemorrhagica.

## CASE 12133

## SURGICAL DEPARTMENT

A married American woman forty-five years old entered January 7 complaining of pain in the lower abdomen.

*Present illness.* Eighteen months before admission she was in bed two days with an attack of chills, fever, headache and backache. Her doctor made a diagnosis of "grippe". Two weeks later she had sharp shooting pain across the region of the umbilicus, originating on the left side, recurring in attacks at intervals of two days to a week, without relation to meals. Five or six months before admission another pain developed low in the abdomen, which felt "deeper" and slightly different from the first. It was intermittent, radiated from the left to the right side, and sometimes "pressed against the spine" low down. At times it was severe enough to double her up. The attacks usually occurred in the afternoon. She always felt well in the morning. Her appetite had gradually become worse. She tried various diets. She thought a full meal aggravated the pain. She frequently felt nauseated during the attacks, but was unable to vomit. The pain was paroxysmal, at times accompanied by fever, and sometimes came on at night. She frequently heard a rumbling in her intestines, but passed no flatus. She had frequent attacks of belching. For the past five weeks her bowels had been constipated. Enemas gave good results. Her best weight was 118 pounds, her present weight 95. She had gradually lost about twenty pounds during the past eighteen months. She felt

weak, and during the past five months had been a chronic invalid, unable to do her housework.

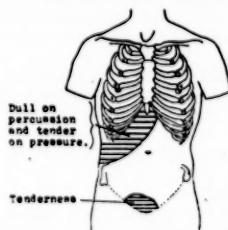
The patient was seen in one attack. She knew it was coming on. It was preceded by several mild intermittent abdominal pains. With the severe attack she had a great desire to vomit, but was unable to do so. She felt almost immediate relief. Mild pain, however, then reappeared.

At the Consultation Clinic December 9 examination showed a tender mass in the left broad ligament and secondary anemia. Pelvic operation was advised.

*Family and marital history good.*

*Past history.* She had cervical repair under ether after the birth of the first of her three children twenty years ago. Sixteen years ago she had cystitis. Recently she had had burning on micturition and the urine looked darker than usual.

*Examination* showed a fairly well developed and poorly nourished woman. The abdomen showed some tenderness (see diagram). Pel-



vic examination showed a slight amount of blood in the vagina, the introitus and vaginal mucous membrane reddened. The cervix showed no pain on motion; lacerated; did not seem to be very freely movable. Fundus normal in size and position. Some thickening in the left vault. An elongated indefinite mass to the left of the uterus. Rectal examination unsatisfactory. Rectum full of feces.

Before operation the chart was not remarkable. The urine was normal. The blood is not recorded. A Wassermann was negative.

*X-ray reports:* The stomach and duodenum showed no definite evidence of organic disease. The six-hour meal had reached the hepatic flexure. The cecum was fairly well filled, freely movable, and not tender. In view of the gastrointestinal symptoms with definite evidence of pelvic inflammation and the sensitiveness in the right upper quadrant a Graham test was done. It showed the gall-bladder very well defined at fifteen and eighteen hours, in the usual position, normal in size and homogeneous in density. After the taking of food the gall-bladder was smaller in size and diminished in density. "No positive evidence of cholecystic disease."

January 14 operation was done. The patient

made a rather stormy recovery, with a great deal of vomiting during the first three days. Fluids were forced. By the 20th she was improved and had less nausea. There was slight leakage of bile tinged watery fluid about the drainage tube. She was started on soft solids and did well. January 21 the tube came out. January 28 the wound was probed and found to be slightly septic. Two days later an adhesive corset was obtained and the patient was allowed to sit up. After this she showed great improvement. Her bowels moved with some difficulty. February 4 she was discharged to a convalescent home.

#### DISCUSSION

BY A. WILLIAM REGGIO, M.D.

The statement of patients that they "have fever" is very misleading. Unless they can prove it with a thermometer it amounts to almost nothing.

In regard to frequent attacks of belching gas, if we ask patients whether they bring up much gas by mouth they nearly always say yes, and very many of the people who do bring up much gas by mouth are "eribbers." They do not know how to relieve any feeling of pressure in the stomach. They make a violent effort, swallow some air, that comes up, and they think they have a great deal of gas on the stomach.

Very frequently burning micturition is due to a markedly limited intake of fluid. Increase the fluid intake and the burning will disappear. Most of these people take rarely over five glasses of fluid a day. That is only forty ounces of intake, and is altogether too little. We ought to have nearer seventy-five ounces in twenty-four hours to have things going smoothly.

The tenderness in the abdomen was on the left, not on the right as this diagram shows. Also the tenderness in the liver region was quite marked.

She had just previously finished menstruation, which accounts for the blood in the vagina.

This patient distinctly gives us an impression of a gastro-intestinal condition. She did not complain of any discomfort or pain in the pelvis. We were somewhat baffled as to what the intestinal condition was. We had the loss of weight, some twenty pounds. There must be some reason for that. She did not have enough gastric symptoms to warrant our suspecting a gastric or duodenal ulcer, but we did suspect trouble in the gall-bladder region. She had the belching which is a very common symptom with gall-bladder trouble; nausea of course is also very common in gall-bladder disease. She did not have any pain referable to the right upper quadrant, but that would not necessarily exclude stone in the gall-bladder. We can have stones in the gall-bladder which are too large to pass down the cystic duct and cause no pain,

yet we will have a very consistent gall-bladder history.

There was no mass to be felt anywhere in the abdomen except in the pelvis, and for that reason we had a gastro-intestinal series taken, and the report was "gastro-intestinal series shows no positive evidence of cholecystic disease."

The X-rays show the gall-bladder very well. It is nicely filled. The second plate, made one hour after eating, shows it to be nearly empty and much diminished in density,—apparently functioning perfectly well.

In spite of the negative X-rays we still felt that there might be something in the gall-bladder, and in view of the fact that she had a definite pelvic pathology we felt that operation was advisable, if only for that condition. Operation was done, and we got a surprise.

#### PRE-OPERATIVE DIAGNOSIS

Chronic salpingitis.  
Chronic pelvic inflammation.

#### OPERATION

Gas-ether. A long median incision. The gall-bladder and stomach appeared normal. Both kidneys and the spleen felt normal. The uterus was normal in size and position, but showed several small fibroids. Both tubes showed small nodules suggestive of old inflammation. The left ovary seemed enlarged and cystic. The left tube and ovary were removed. The fibroids were also removed. The wound was closed.

On inspecting the appendix it was found that there was a definite indurated swollen tumor of the terminal two inches of the ileum and in the ileum itself rather than in the cecum or the ileocecal valve. It could not be determined whether this tumor was inflammatory or malignant. It seemed best to do a resection. The ileum was clamped across and cut about eight inches above the growth. The proximal end was turned in. The rest of the ileum, the cecum and the ascending colon up to a point just below the hepatic flexure were removed. The proximal end of the colon was turned in. A lateral anastomosis was then done between the terminal ileum and the transverse colon by the same method as gastroenterostomy. About twelve inches above this anastomosis a number ten soft rubber catheter was placed in the ileum by the Witzel method and brought out through the incision.

#### PATHOLOGICAL REPORT

The cecum with the terminal ileum. On section the mucous surface of the cecum is rough and replaced by small polypoid-like growths for a distance of 5 cm. from the ileocecal valve. The walls are thickened. No enlarged lymph nodes can be found.

The appendix shows nothing noteworthy.

The Fallopian tube and ovary accompany the specimen and show nothing abnormal. There is also a pea-sized fibrous tumor separate.

A microscopic examination of the cecum shows wandering cell infiltration and fibrosis of its walls. The mucous membrane in places is superficially eroded. No epithelioid cell tubercles can be found. There is no evidence of malignant disease. The examination is consistent with an ileocecal tuberculosis.

Chronic inflammation.

#### FURTHER DISCUSSION

After closing the wound in the uterus at which the myomectomy was done we looked still further. Sometimes it is extremely difficult to tell by palpation and inspection whether we are dealing with malignancy or only chronic inflammation.

It seemed best to do a resection, because it could not be definitely determined whether the tumor was cancer or not. If it was cancer it would have been very unwise to leave it in, as resection in this case presented no difficulty.

There were no enlarged lymph nodes anywhere to be found.

Provision of a vent for gas is a precaution that should always be taken in resecting the large intestine. It is extremely unsafe and unwise to do a resection of the large intestine and not put in some form of vent through which the accumulated gas can pass. One of the great risks in the convalescence after a large intestine resection is that the sutures may burst due to gas pressure. Undoubtedly there will be swelling of the stoma with decrease in its size; fecal matter comes and blocks that opening, and the gas pressure and distension will tear out the sutures and peritonitis follow. But if we have a vent, the gas will pass out, the pressure on the stoma will quickly quiet down, and the stoma will function. It never does any harm. After a few days the tube comes out, when the stoma is functioning.

The erosion of the mucous membrane was due probably to the length of time she had had it. She must have had it for a number of years.

The pathological diagnosis was chronic inflammation, but we did feel that this was a tuberculous thing. There we have the answer to her gastro-intestinal upsets. The lumen of the ileum was very small. She would get some moderately firm feces going down—I suppose we might call it feces as low in the ileum as that—that would get plugged; then the feces would pass through and the attack be over. The nausea was probably due to the distension and pain from gas.

She made a fairly good recovery, somewhat stormy. Most patients would, after an intestinal resection. On the third day she had a normal bowel movement, if I remember correctly.

The tube came out in seven days. If we want a tube to come out early it should be sewed in with plain catgut, not with chromic. Otherwise it may stay for weeks. The wound naturally would be slightly septic from having the tube in.

I understand that she is now getting on very well.

This case is quite interesting in view of what was found, because we did not suspect anything of that nature.

#### DIAGNOSIS

Chronic inflammatory tumor of intestine involving the ileocecal valve.

Chronic oophoritis, left.

Chronic salpingitis, left.

#### THE HAWAIIAN SUNSHINE

THE following is not tourist bureau broad-casting, but cold facts:

CASE 1—Man age 60. For four years patient had suffered from a severe form of weeping eczema about the anus and buttocks. All types of treatment had been tried. The patient had spent considerable time at the Mayo Clinic but to no avail. Honolulu sunshine was then applied in daily doses—starting with only a few minutes but increasing daily. At present three months after the onset of the treatment the skin is clear for the first time in four years.

CASE 2. Man age —. Patient was a doctor in Chicago; he became afflicted with a very widespread diffuse psoriasis. Over a period of twenty years he had tried every known form of treatment in the United States and Europe. The condition finally became so widespread it completely incapacitated him. He made an offer to his insurance company to settle for \$5000.00, but on the report of their doctors they refused this offer, preferring to pay him \$50.00 a week for the rest of his life. Indications were of a speedy termination. He came to Hawaii and began regular daily exposures to the sun. After four months he is today completely cured for the first time in twenty years. He is going back to Chicago to see if the condition will recur.

When in doubt—use sunshine! It is therefore with particular pleasure that we announce a gift from Mr. E. Faxon Bishop of money to equip our sun porch. We hope to turn it into a real heliotherapy department.—*The Queens Hospital Bulletin.*

## THE BOSTON Medical and Surgical Journal

Established in 1828

Published by The Massachusetts Medical Society under the jurisdiction of the following-named committee:

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SUBSCRIPTION TERMS: \$5.00 per year in advance, postage paid for the United States, \$7.50 per year for all foreign countries belonging to the Postal Union.

Material for early publication should be received not later than noon on Saturday. Orders for reprints must be sent to the Journal office, 126 Massachusetts Ave.

The Journal does not hold itself responsible for statements made by any contributor.

Communications should be addressed to The Boston Medical and Surgical Journal, 126 Massachusetts Ave., Boston, Mass.

### ADVANTAGES AND OBLIGATIONS WITH RESPECT TO MEMBERSHIP IN THE MASSACHUSETTS MEDICAL SOCIETY

We have been asked to write a few words on this subject.

The question sometimes asked by persons who have been advised to join the Massachusetts Medical Society is in effect, "What is the advantage to be derived from membership?" or in the language of the street, "What do I get out of it?"

The answer to this question is identical with that given so often when membership in organizations designed to benefit the public and individual members is under consideration, viz., a member usually profits in proportion to contributions made by him. Contributions in such cases mean participation in work of the organization rather than money or membership dues.

The Massachusetts Medical Society was founded on the principles laid down in the preamble to the Act of Incorporation where it is stated that "As Health is essentially necessary to the Happiness of Society; and as its Preservation or Recovery is closely connected with the Knowledge of the Animal Economy and the Properties and Efforts of Medicines," etc. Herein the Commonwealth by its endorsement

of the preamble notified the members of the Society that the fundamental obligation of the members is to preserve health, and it was then clearly understood as it still is, that the efficiency of the individual is enhanced through association with others engaged in the same activities. Hence, the primary obligation is to serve the Commonwealth in caring for the health of the people, and in order to do this in the most effective manner the founders provided for co-operation through membership in a society. In a broad way, it is the duty of every well-qualified practitioner to join a medical society and after joining, to contribute such activity as his ability may warrant toward making medicine perform its functions. As one contributes to the dissemination of knowledge through association with his fellows, he will add to his own and thereby gain prestige. Conversely, one who is carried as dead freight only contributes the small amount of his annual dues.

Membership is secured through the district society where one may become familiar with the routine of medical meetings, the election of officers, the system of making reports, the financial substructure of the Society and the opportunities for service. If he is the victim of an inferiority complex or, in other words, lacking in ambition or energy he will remain in the background and in all probability will take his position in lay society very similar to that occupied in the professional body.

On the other hand, if he is interested in the proceedings, prepares himself for participating in discussions and demonstrates loyalty, there will be found opportunities for enjoyable activities. He will grow.

Preparation for society activities means study of medical literature, availing himself of every reasonable opportunity for consultations and association with prominent members.

A very definite personal advantage lies in the protection which the society gives in the event of a law-suit in connection with practice.

It is the privilege of every member to show interest in the work of the officers. In order to do this effectively all reports should be scrutinized and errors or inaccuracies brought to the attention of officers in charge, for secretaries and treasurers devote considerable time to corrections which result from inattention of members.

All men entering the practice of medicine should be familiar with public health laws and regulations and regard themselves as parts of the public health activities of the state. A very important feature of the doctor's life in a community is that concerned with the education of those under his care in all matters of preventive medicine and unsound practice. A doctor should be a self-appointed teacher, as set forth in section one of the Code of Ethics of the

Massachusetts Medical Society. If this responsibility had been universally met there would be less opposition to vaccination, animal experimentation and scientific medicine.

The officials of the State and District Societies are hard at work combatting errors. Their labor is often unproductive because of the indifference of the rank and file of the profession.

These few words written in response to a request are only suggestive. The greater inspiration to our Fellows of the Massachusetts Medical Society will come from perusal of the History of this Society recently written by its Secretary, Dr. Walter L. Burrage. The writer of this believes that careful study of this volume will add much to the usefulness of everyone who will give time to it.

### CHLORINE GAS THERAPY

DR. VICTOR ROBINSON, Editor of *Medical Life*, has secured endorsement of the chlorine gas treatment from the following named physicians:—Harold Hays of New York City; Wm. N. Bannon, County Health Officer, U. S. P. H. S., Missouri; George Herbert Miller of California; John A. Spengler, F.A.C.S., New York; Luder F. Behling of South Carolina; Albin M. Painter of Missouri; George A. McDonald of Illinois; J. A. Walker of the Maternity and Children's Hospital of Oklahoma; Zama Feldstein of New York City; Robert H. Taylor, Arkansas; J. Thomas Dowling of the Masonic Clinic, Washington; B. L. Jenkins, Texas; W. T. Hasler, Utah; E. R. McIntosh, West Virginia; J. R. Hughes, Wisconsin; G. W. Ison, Wisconsin; W. T. Carpenter, Washington; E. W. Peery, Virginia; R. Lester Hudgins, Virginia; P. Gallagher, Texas; W. D. Francis, Texas; C. B. Williams, Texas; E. L. Maxwell, Texas; E. D. Price, Texas; R. E. Warren, Tennessee; J. W. Foster, South Dakota; H. G. Dean, Pennsylvania; A. L. Smith, Pennsylvania; W. Wilkinson, Arizona; John Y. Oldham, California; F. H. Williams, California; M. M. McCord, Georgia; H. L. Shafer, Illinois; T. T. Hoxsey, Iowa; G. H. Treadgold, Michigan; W. J. Birkefer, Nebraska; Charles H. Campbell, Nebraska; W. M. Lancaster, New Mexico; M. S. Lord, New York; G. Alexander, North Carolina; C. P. Ambler, North Carolina; W. R. Hosick, Ohio; Cary F. Legge, Ohio; E. P. Trittschuh, Ohio; C. A. Judge, Pennsylvania; S. J. Laekey, Pennsylvania; I. Kieth Briggs, Virginia; J. E. Gilliland, Washington; J. K. Goodrich, Wisconsin; F. J. Woehos, Wisconsin; Nelson M. Black, Wisconsin.

All letters are on file and open to inspection. The use of chlorine gas is contra-indicated in cases of asthma and hay fever.

It is claimed that negative results are due to faulty apparatus or improper administration.

So far as we have learned authorities in this section are not convinced of the value of this

treatment. We wonder whether this may not be a fad like many which have been popular for a time and then discarded.

That it has been used in treating President Coolidge is excellent advertising for its employment. With endorsement given by so many practitioners it would be of interest if competent observers would make a group study of this treatment and publish a report. The claims made are certainly impressive so far as multiple reports are concerned, including the statement that many lives have been saved. Such assertions must be checked by the study of a very large number of cases to be of value for many respiratory infections are neither serious or of long duration and it would be the tendency of an enthusiast to draw favorable conclusion in an epidemic of mild intensity.

Everybody understands that a cold may be a precursor of pneumonia or some other serious disease but nobody can logically affirm that a given remedy can at the present time prevent the development of pneumonia any more than that the old claim that remedies "broke up" typhoid fever was a logical deduction.

We would like to have more evidence than has been presented thus far.

### APPOINTMENT OF DR. CLARENCE L. SCAMMAN TO THE POSITION OF DIRECTOR OF COMMUNICABLE DISEASES AND DEPUTY COMMISSIONER OF PUBLIC HEALTH IN THE MASSACHUSETTS STATE DEPARTMENT OF PUBLIC HEALTH

This appointment has been confirmed by the Governor and Council.

Dr. Clarence L. Scamman was born at St. Albans, Maine, in 1888, graduated from Bowdoin in 1909 and from the Bowdoin Medical School in 1912. He was licensed to practice medicine in Rhode Island in 1923. In 1912 and 1913 Dr. Scamman served at the Central Maine General Hospital, going to the Providence Lying-In Hospital, Providence, Rhode Island, for three months service during 1913. From 1913 to 1917 he was in private practice in East Millinocket, Maine. During the war (1917-1919) he served as a Captain, M.C., U. S. A., in the capacity of Post Surgeon, Camp Crane, Allentown, Pennsylvania. From 1919 to 1921 Dr. Scamman was in general practice in Dexter and Portland, Maine. He attended the Harvard-M. I. T. School of Public Health in 1921-1922, obtaining the degree of C.P.H. Since 1922 Dr. Scamman has been Deputy Superintendent of Health for the Providence, Rhode Island, Health Department under Dr. Charles V. Chapin, whose reputation as a health officer is international. In this capacity he has had a rare opportunity for practical experience in health work.

# THE APPOINTMENT OF DR. W. W. FULLERTON

ILL health has led Dr. A. Elliot Paine of Brockton to resign from the state service as Medical Examiner for Number one Plymouth District. Dr. Paine has been an example of the wise and efficient medical examiner. A worthy successor has been found in the person of Dr. W. W. Fullerton who has been advanced from the position of Associate Examiner to take Dr. Paine's place.

Dr. Fullerton is a native of Brockton. His medical education was in the College of Physicians and Surgeons of Baltimore. He later took a two-year course in medicine and pathology at the Johns Hopkins Hospital. He served as Brockton City Physician for three years. During the War he served as Captain in the Medical Corps. He is a fellow of the Massachusetts Medical Society.

# THE ABOLITION OF CAPITAL PUNISHMENT

THE hysteria shown by a woman who affirms that there are ten women who would submit to electrocution if thereby the people would be led to abolish this custom is evidence of weakness of mind caused by misguided sympathy.

Capital punishment has been abolished to a considerable degree already and with the development of greater cunning on the part of the murderers, the employment of legal resources, and the disinclination of juries to convict, this form of punishment is becoming less and less common, in its relative proportion to murders.

In accounts of most trials one is led to believe that more safeguards are erected about the murderer than are provided for the state or individual victim.

Society is entitled to better protection than it now has. The problem has hitherto been beyond the human mind to solve. Its solution will depend more on better police departments and better understanding of the criminal than on hysteria.

# THIS WEEK'S ISSUE

CONTAINS articles by the following named authors:

CRABTREE, E. GRANVILLE, Ph. B., F. A. C. S., M. D. Harvard Medical School 1914; Instructor in Surgery, Harvard Medical School; Assistant Urologist, Massachusetts General Hospital; Prologist, Beth Israel and Boston Lying-In Hospitals. His address is 99 Commonwealth Ave., Boston. His subject is "Transactions of the New England Branch of the American Urological Association." Page 569.

CUNNINGHAM, JOHN HENRY, JR., F. A. C. S., M. D. Harvard Medical School 1902; Associate in Genito Urinary Surgery, Harvard Graduate School of Medicine; Surgeon, Long Island Hospital; Assistant Surgeon, Boston City Hospital; Consulting Surgeon, Rufus S. Frost Hospital, Chelsea; Melrose Hospital; Jordan Hospital, Plymouth and Brockton Hospitals. His address is 46 Gloucester St., Boston, Mass.; and

GRAVES, ROGER C., M. D. Niagara University Medical Department, Buffalo, N. Y. 1918; Member, New England Branch of the American Urological Association. His office is 46 Gloucester St., Boston. The subject of their paper is "Tumors of the Bladder." Page 573.

KEEFE, JOHN W., LL. D., F. A. C. S., M. D. University City of New York Medical Department 1884; Surgeon in Chief, John W. Keefe Surgery; Consulting Surgeon, Rhode Island, St. Joseph's, Providence Lying-In, Providence City, Woonsocket and other Hospitals; Ex-President, American Association of Obstetricians, Gynecologists and Abdominal Surgeons. His address is 262 Blackstone Boulevard, Providence, R. I. His subject is "Diverticulitis of the Sigmoid or Pelvic Colon with Sigmoidovesical Fistula." Page 577.

WOLFSON, MAST, M. D. Harvard Medical School 1920; Associate Professor of Clinical Medicine, Stanford University School of Medicine, San Francisco, California. Associated with Dr. Wolfson is

BRYAN, LLOYD, M. D. University of California Medical School 1911; Assistant Clinical Professor in Roentgenology in the same institution. The subject of their article is "Infectious Muscular Erosion—An End Result in the Lumbar Region." Page 586.

# The Massachusetts Medical Society

# PAPERS FOR THE ANNUAL MEETING

Fellows are requested to send the titles of papers they may wish to read at the Annual Meeting of the Massachusetts Medical Society, which will be held in the Kimball Hotel, Springfield, on June 8 and 9, 1926, to one of the officers of the appropriate SECTION. Do it now, before the official program is made up. The program, under the terms of the By-Laws, must be mailed to every Fellow a month before the meeting. The officers of the SECTIONS are:

SECTION OF MEDICINE: *Chairman*, W. H. Robey, Boston. *Secretary*, Maurice Fremont-Smith, Boston.

SECTION OF SURGERY: *Chairman*, J. M. Birnie, Springfield. *Secretary*, H. P. Stevens, Boston.

SECTION OF TUBERCULOSIS: *Chairman*, A. S.

MackKnight, Attleborough. *Secretary*, Randall Clifford, Boston.

SECTION OF PEDIATRICS: *Chairman*, R. M. Smith, Boston. *Secretary*, J. Herbert Young, Boston.

SECTION OF OBSTETRICS AND GYNECOLOGY: *Chairman*, C. E. Mongan, Somerville. *Secretary*, F. C. Irving, Boston.

SECTION OF RADIOLOGY AND PHYSIOTHERAPY: *Chairman*, L. B. Morrison, Boston. *Secretary*, F. B. Granger, Boston.

The street and number addresses will be found in the Directory of 1926.

WALTER L. BURRAGE, *Secretary*.

### LEGISLATIVE NOTES

HOUSE Bill No. 1365, introduced by Mr. Slater Washburn of Worcester, which was drawn and sponsored by Dr. S. B. Woodward, Ex-President of The Massachusetts Medical Society, was given its third reading and passed to be engrossed March 25th by an affirmative vote of 101 over 92 by the opponents of vaccination. Copies of this bill have been published in this Journal and sent to all members of the Massachusetts Medical and the Massachusetts Homeopathic Medical Societies. The bill will now go to the Senate unless the opponents succeed in getting a vote to reconsider.

The debate was spirited and at times acrimonious. Mr. Bell of Somerville had the bill in charge as House Chairman of the Committee on Public Health. In his final argument Mr. Bell showed a grasp of the situation and courage of a high order and in ringing phrases denounced those organizations by name which have fought vaccination for years.

Dr. Charles Abbott of Andover held the attention of the House when he gave a scholarly resume of the facts supporting the contention for the universal use of vaccination.

Mr. Shattuck of Boston, Mr. Beck of Chelsea, Dr. Hale of Springfield, Dr. Clark of Brockton, Mr. Perry of Belmont and Mr. Hunnewell of Boston supported the bill. The opponents confined their arguments to the rapid, sensational and false statements which have been rehearsed from time to time before legislative committees. The imperfect and misleading records of the Philippine situation years ago is still relied upon by the opponents although fully explained and refuted by Dr. Woodward.

The situation is most critical because there are powerful interests opposed to vaccination which are endorsed by several senators.

Dr. J. S. Stone has sent an appeal to the officers of the District Societies advising immediate contact with senators with the hope that those who are unprejudiced will be influenced to support the bill. If the bill is acted on promptly

its fate will be known before this report is published.

The approval of the lower branch of the legislature is very gratifying to Dr. Woodward who has labored for ten years in promulgating the scientific facts relating to vaccination. With this demonstration of approval we can confidently expect that this particular public health measure will eventually be generally endorsed.

### MISCELLANY

#### NOTES FROM THE BOSTON MEDICAL LIBRARY

FROM one of its friends the library has received a very interesting document, the Commission of Ephraim Otis, Jr., Mate in the Continental Army dated 1757. It is signed by Governor Hutchinson and all the Governor's Council.

Otis, the son of a physician, was born in 1735, graduated from Harvard in 1756, and was in the Indian Massacre at the taking of Fort William Henry in August 1757, but escaped by jumping into Lake George. His Commission was in his pocket at the time and is badly water-stained and wrinkled. Otis received the degree of M.D. at Yale in 1759. He settled at Scituate, Mass., and enjoyed a very extensive practice. He was on the first committee appointed by the Town in 1774 to act in reference to the Revolutionary War.

Among recent notable accessions may be mentioned a very fine extra-illustrated copy of the 1884 "Gold-headed Cane" enlarged by the addition of one hundred thirty eight plates, formerly the property of Dr. J. P. Oliver of Boston. Also, The Regiment of life. . . with the book of children, London, 1560 by Thomas Phayre, M.D. Oxford, 1558. The first book in English on pediatrics! Phayre was a lawyer, physician and classical translator. In this book is described forty diseases with their remedies. Eight pages are devoted to infant nutrition and breast feeding is recommended.

Sets of the very scarce *Nederlandsche Tijdschrift voor pharmacie, chemie en toxicologie*, the organ of the Netherlands Society for the Promotion of Pharmacy complete from the beginning in 1849 and the *Tijdschrift voor Tandheelkunde*, the organ of the Dutch dentists, have been added to the periodical files.

The first volume of the new German "Ergebnisse der Biologie" has just been issued and is a valuable addition to the field of comparative physiology. It is edited by Frisch of Munich, Goldschmidt of Berlin, Ruhland of Leipzig and Winterstein of Rostock. The publisher is Springer of Berlin and the printing, paper and format are excellent. The price of the first volume is 38 marks or about \$9.50. The first

article by Biedermann of Jena, on the comparative physiology of the integuments of the vertebrates, consisting of 342 pages with 110 illustrations and 19 pages of bibliography, is a very comprehensive survey of subject to date. Another important contribution is one by Waech of Rostock on bird migration in which he reviews the subject from the time of Aristotle to the present. Other articles are on the subjects of the movement of sap in plants, the behavior of the plant cell towards salt, and the nitrates, nitrites and ammonia as a source of nitrogen for higher plants.

According to a letter received from Dr. Harold E. Stevens, a non-resident member of the Massachusetts Medical Society, living in California, there is a great deal of illness there in spite of the fact that the state is boomed for its wonderful climate.

#### AN ABSTRACT OF THE ADDRESS OF DR. FRANCIS CARTER WOOD RELATIVE TO THE LEAD TREATMENT OF CANCER

DR. FRANCIS CARTER WOOD, Director of the Institute of Cancer Research, Columbia University, New York, spoke briefly concerning what he had seen in Liverpool of the use of colloidal lead in the treatment of inoperable cancer. The patients, he said, were first carefully studied for evidences of renal insufficiency, and all those without normal kidneys were rejected, owing to the danger of lead poisoning. Professor Blair Bell frequently did operations for removal of as much as possible of a tumor, the theory being that as the lead divides itself proportionately between organs and tumors, if the tumor is small a larger proportion reaches the growth without danger of damage to the organs, but that where the tumor is very large, a relatively small quantity reaches it. The lead used was a colloidal preparation made by a process that has not yet been published. The fluid was injected intravenously in doses of 0.10 gm. of lead once a week for six weeks. The blood was studied for stippling, and when this was found in a considerable proportion of the red cells, treatment was interrupted until the blood had returned to normal. After the injections, the patients had few unpleasant symptoms. It was interesting that neither cerebral nor peripheral nerve lesions occurred. After a course of six treatments, the patient was usually discharged for a rest, even if the tumor had not disappeared. Another series can be given at a later time when the blood returns to normal. If a patient is very anemic, a transfusion is done.

The results are quite striking. About 20 per cent. of the patients are considered benefitted. In the remaining 80 per cent. the cancer remains

progressive, and is not influenced by the lead. A considerable proportion of the 50 patients who have been benefitted, out of the 250 treated, are at present apparently in perfect health, after periods of two to three years. One patient with an inoperable carcinoma of the breast has gone five years and shows no evidence of the disease. The striking thing is the good nutrition and color of these patients, even though some portion of the tumor may still be palpable.

It is impossible to judge at the present time of the ultimate development of this agent in cancer therapy. It may be that the maximum achievement has been reached, but even so it is a very important step forward, as it is the first example of a purely medicinal therapy for cancer which can show any number of cases improved for a period of years.

#### GIFTS OF \$29,000 TO NEW YORK UNIVERSITY MEDICAL COLLEGE ANNOUNCED BY CHANCELLOR BROWN

GIFTS amounting to \$29,000 have been made to New York University and Bellevue Hospital Medical College during the current year for use in various departments, according to an announcement from Chancellor Elmer Ellsworth Brown.

Through the offices of Dr. Samuel A. Brown, dean of the medical college, R. T. Crane, Jr., of Chicago has for the second year given \$4,000 for the study of anaphylaxis. These studies are being carried on under Professor Holmes C. Jackson, head of the department of physiology, by Dr. Bret Ratner of the department of children's diseases.

These studies under the Crane fund involve the problem of asthma, eczema, hay fever, and urticaria, diseases which are related to one another. In order to know best how to diagnose and treat these conditions, further experimentation is necessary. Rather than investigate these causative factors in the human subject, certain phenomena known as anaphylaxis which in animals simulate the disease mentioned, can be studied. Dr. Jackson and Dr. Ratner have been able to reproduce certain symptoms in animals simulating asthma, which will enable them study this disease accurately and in great detail. This work, however, is being applied only to the study of these conditions in children.

It is well-known that most of these diseases start in early infancy and childhood. Several of their studies have been presented before scientific and medical societies of New York City in the past year.

An anonymous gift of \$10,000 has been made through Dr. George Stewart for the expenses of the department of surgery for the current year, according to the Chancellor's statement.

Five thousand dollars has been given anony-

mously, through Professor John M. Wheeler, for experimental work in ophthalmology.

The gift of \$10,000 a year for studies in the prevention and cure of pneumonia, given by Lucius N. Littauer through Dr. William H. Park, head of the department of bacteriology and hygiene, was announced some time ago.

### INDENTURED CHILDREN

CHILD indenture, a relic of 16th-century England, but still permitted by the statutes of 12 States\* in 20th-century America, is scored by the Children's Bureau of the U. S. Department of Labor in a report made public today.

Indentured children in Wisconsin, one of the 12 States, were studied by the Children's Bureau at the request of Wisconsin authorities. The homes provided for a large proportion of the 827 children studied, who were indentured on written contracts by the State Public School at Sparta, Wis., under a law enacted in 1885, were in many cases actually detrimental to the children.

Many of the children, the Bureau found, worked virtually as unpaid servants in households or on farms, often deprived of schooling and recreation and sometimes cruelly treated. Five hundred and forty indenture homes in many parts of the State were visited by the Children's Bureau investigators who, after very careful and conservative weighing of the facts, judged 48 per cent of the homes as actually detrimental to the children, 44 per cent as satisfactory and only 8 per cent as high grade.

The Bureau report cites cases in illustration of the conditions suffered by the indentured children. For instance, in one case a boy convalescing from pneumonia was placed out on contract to do farm work. In another case, a boy of 14 was indentured and stayed 10 months in a home doing chores, being considered too sick to attend school, was finally returned to the State school and then sent to a tuberculosis sanitarium, where he died. A girl of 14 who worked as nursemaid, cook, and laundress in her indenture home and attended school irregularly, was not sent to church or Sunday-School because, her foster mother said, "Her mind was distracted from her work enough at school as it was." A girl of 12 did housework, helped care for 3 children, prepared breakfast, milked 5 or 6 cows every evening and helped with the farm work, but her foster father told the investigator that he would "never take another child unless I can get one young enough, so that I can break 'em in to work." A boy of 9, indentured on a farm, did chores, carried wood and hoed; one day he left a gate open and was whipped so severely he ran away. Neighbors found him hiding in an apple tree, his body black and blue.

\*Arkansas, Illinois, Kansas, Maryland, Pennsylvania, Rhode Island, Virginia, West Virginia, Indiana, Michigan, Nevada and Wisconsin.

The children were usually committed because of neglect, abandonment, the poverty or the immorality of parents, by county poor commissioners or judges, who were not equipped to investigate the cases or to apply measures for rehabilitating homes or for keeping the families together. When committed, the children were sent to the State Public School and were then indentured or placed out for adoption with little or no attempt to find the home that best met the needs of the child. Supervision after placement was inadequate, with only 2 agents to guard the welfare of the approximately 500 children scattered throughout the State, so that the children might and, in some cases did, wait months or years for a chance to complain to the agent of cruelty or overwork.

The Children's Bureau study was completed, so far as the gathering of facts was concerned, in 1923. Wisconsin authorities have notified the Bureau that some improvements have been made. The law is still the same as in 1923, however, and according to the director of the juvenile division of the State board of control, sufficient appropriations have not yet been made to supply an adequate staff at the State Public School.

Recommendations of the Children's Bureau include abolition of indenture, a program for the prevention of child dependency and the break-up of homes, careful study of the individual child, and better investigation and supervision of homes in which children are placed.—*Bulletin U. S. Dept. of Labor.*

### AUTOMOBILES MENACE CHILD LIFE

"THE automobile is as great a menace to child life today as scarlet fever and whooping cough combined," according to statistics compiled by the Metropolitan Life Insurance Company. Deaths from automobile accidents, according to the company's figures, have increased 50 per cent since 1920, two-fifths of the deaths being among children under 15. In other respects 1925 is pronounced a banner year among the Metropolitan's industrial policy-holders, who constitute one-seventh of the total and one-fourth of the rural population of the United States and Canada. Big gains were made in reducing death rates from measles, scarlet fever, diphtheria and whooping cough—the four chief children's diseases. A low record was also established for diseases associated with maternity.—*Compiled by the U. S. Children's Bureau.*

### RURAL DOCTORS AND HOSPITALS

FEWER and fewer country doctors are reported in rural areas recently studied by the U. S. Department of Agriculture. Forty Kentucky counties in 1924 had not adequate medical service, one of the counties having no doctor at all.

In a Montana county of 5,000 square miles there were only 3 doctors and no hospitals, in Minnesota 127 villages were without doctors. One answer is the rural hospital. Seventeen States permit counties to levy taxes for hospital purposes. The Commonwealth Fund of New York is now offering to aid rural communities in erecting hospitals.—*Compiled by the U. S. Children's Bureau.*

# RESULTS OF THE NOVEMBER, 1925, EXAMINATION CONDUCTED BY THE MASSACHUSETTS BOARD OF REGISTRATION IN MEDICINE

## PHYSICIANS REGISTERED BY EXAMINATION

Lamoureux, Amedee P., Adams, Mass.—St. Louis College of Physicians and Surgeons.  
Michalski, Kasimer E., 297 Pleasant Street, Worcester, Mass.—Middlesex College of Medicine and Surgery.  
Knowles, William T., 87 Alban Street, Dorchester, Mass.—Massachusetts College of Osteopathy.  
Pope, Marion D., 174 Summer Street, Somerville, Mass.—Massachusetts College of Osteopathy.  
Sheehy, John J., 60 Walt Street, Roxbury, Mass.—Massachusetts College of Osteopathy.  
Brayles, Elizabeth L., Simpson College, Wellesley, Mass.—University of Nebraska.  
Gage, Earl J., Grace Hospital, New Haven, Conn.—Tufts College Medical School.  
Draper, Russell P., Box 57, Worcester, Mass.—Tufts College Medical School.  
LaZerte, Leonard C., 936 Dwight Street, Holyoke, Mass.—McGill University.  
Fields, Russell J., Gallinger Municipal Hospital, Washington, D. C.—Georgetown University.  
Heinz, Herschel, St. Luke's Hospital, New Bedford, Mass.—Harvard Medical School.  
Rapp, Louis W., 631 Morton Street, Mattapan, Mass.—Tufts College Medical School.  
Adams, John G., Salem Hospital, Salem, Mass.—University of Vermont.  
Card, Walton G., Eastern Maine General Hospital, Bangor, Me.—Tufts College Medical School.  
Matsis, Demetrius M., 233 Carew Street, Springfield, Mass.—Tufts College Medical School.  
Freimer, Lester Conrad, Carney Hospital, South Boston, Mass.—Tufts College Medical School.  
Segal, Myner G., Long Island Hospital, Boston, Mass.—Tufts College Medical School.  
Massa, Antonio, 215 Hanover Street, Boston, Mass.—University of Naples.  
Allen, John W., 24 Circuit Street, Roxbury, Mass.—Philadelphia College of Osteopathy.  
Wright, Elizabeth, 534 Beacon Street, Boston, Mass.—Columbia University College of Physicians and Surgeons.  
Evans, Maurice G., Waltham Hospital, Waltham, Mass.—Tufts College Medical School.

## REGISTERED ON CERTIFICATION BY THE NATIONAL BOARD

Johnson, Walfred, 846 Millbury Street, Worcester, Mass.—Washington University, St. Louis.  
Smith, Garnet P., 270 Locust Street, Fall River, Mass.—Harvard Medical School.  
Smith, Carleton F., City Hospital, Worcester, Mass.—Harvard Medical School.  
Thompson, Vernon T., Children's Hospital, Boston, Mass.—Harvard Medical School.  
Garfield, Stanton, 44 West Cedar Street, Boston, Mass.—Harvard Medical School.  
Prathier, George C., 99 Commonwealth Avenue, Boston, Mass.—Harvard Medical School.  
White, James C., Massachusetts General Hospital, Boston, Mass.—Harvard Medical School.  
Lynch, Leo J., Massachusetts Homeopathic Hospital,

Boston, Mass.—Boston University School of Medicine.  
Skolitsky, Simon M., Memorial Hospital, Albany, N. Y.—Tufts College Medical School.  
Philbrick, Maurice S., Worcester City Hospital, Worcester, Mass.—Tufts College Medical School.  
Whitney, Dorothea F., Belmont Hospital, Worcester, Mass.—University of Pennsylvania.  
Levene, George, 6 Westland Avenue, Boston, Mass.—Boston University School of Medicine.  
Davis, David, 28 Angell Street, Dorchester, Mass.—Cornell Medical School.  
McGarty, Michael E., Boston City Hospital, Boston, Mass.—Harvard Medical School.  
Lenhard, Raymond, 1059 Beacon Street, Boston, Mass.—Johns Hopkins Medical School.  
Ritchie, Saul, Waltham Hospital, Waltham, Mass.—Tufts College Medical School.  
Dubin, Samuel, Waltham Hospital, Waltham, Mass.—Tufts College Medical School.  
Fife, John K., 638 Beacon Street, Boston, Mass.—McGill University.  
von Berg, Johannes, 844 East Grand Avenue, Detroit, Mich.—University of Grunswall.  
Brassau, Arthur C., Cambridge Hospital, Cambridge, Mass.—Tufts College Medical School.  
McKhann, Charles F., Jr., Children's Hospital, Boston, Mass.—University of Cincinnati.  
Fried, Boris M., Peter Bent Brigham Hospital, Boston, Mass.—Imperial Nicholas University.  
Bakst, Jacob B., 42 Juniper Street, Lawrence—Tufts College Medical School.  
Courtney, Roy F., Lawrence Boulevard, Lowell, Mass.—College of Physicians and Surgeons, Boston.  
Little, Harold G., Boston City Hospital, Boston, Mass.—Tufts College Medical School.  
Shay, Francis L., 736 Cambridge Street, Brighton—Tufts College Medical School.

Number examined	83
Registered	41
Rejected	42
Per cent. rejected	50+

## RECENT DEATHS

**DE LANGLE**—DR. CHARLES PETIT DE LANGLE, a Fellow of the Massachusetts Medical Society, formerly of Lynn, and a recent resident of Yountville, Calif., is reported to have died in France, in November, 1925.  
Dr. De Langle was a graduate of the Boston College of Physicians and Surgeons in 1896 and joined the Massachusetts Medical Society two years later, from Boston. He had been in poor health for a series of years.

**TILTON**—DR. FRANK HERBERT TILTON, a Fellow of the Massachusetts Medical Society, died at his home in East Boston, March 24, 1926, at the age of 70.

**LITTLE**—DR. JOHN MASON LITTLE, a Fellow of the Massachusetts Medical Society, died at his home in Brookline, of heart disease, March 23, 1926, aged 50.

**STICKNEY**—DR. GEORGE AUGUSTUS STICKNEY, a Fellow of the Massachusetts Medical Society since 1884, died at his home in Beverly, March 22, 1926, at the age of 68.

He was a native of Beverly, was graduated from the Harvard Medical School in the class of 1882, and was medical examiner for the North Shore district for 35 years and also was one of the staff at the Beverly Hospital.

Dr. Stickney was a member of the Beverly Lodge of Elks and the Now and Then Association of Salem. He is survived by his widow, two sons, G. Horton Stickney and Dr. Robert C. Stickney, a member of the State medical society, and a daughter, Mrs. Walter L. Alley, all of Beverly.

RESUME OF COMMUNICABLE DISEASES  
IN MASSACHUSETTS

FEBRUARY, 1926

## GENERAL PREVALENCE

German measles is the only common communicable disease which showed an increase over last month.

	Feb., 1926	Jan., 1926	Feb., 1925
German measles	478	251	1,470

## RARE DISEASES

*Anterior poliomyelitis* was reported from Attleboro, 1; Brockton, 1; Newton, 2; total, 4.

*Anthrax* was reported from Haverhill, 1.

*Dog-bite requiring anti-rabic treatment* was reported from Belmont, 2; Billerica, 1; Boston, 2; Cambridge, 1; Lowell, 5; Peabody, 9; Quincy, 1; Revere, 1; total, 22.

*Encephalitis lethargica* was reported from Belmont, 1; Boston, 5; Charlton, 1; Cambridge, 1; Malden, 1; New Bedford, 1; Northampton, 1; Pittsfield, 1; Salem, 1; Springfield, 1; total, 14.

*Epidemic cerebrospinal meningitis* was reported from Boston, 2; Fitchburg, 1; Saugus, 1; total, 4.

*Hookworm* was reported from Boston, 3; Springfield, 1; total, 4.

*Pellagra* was reported from Boston, 1.

*Septic sore throat* was reported from Boston, 7; Cambridge, 1; Lowell, 2; Springfield, 1; Watertown, 1; Worcester, 1; total, 13.

*Tetanus* was reported from Boston, 2.

*Trachoma* was reported from Boston, 3.

*Trichinosis* was reported from Boston, 1; Newton, 1; total, 2.

## DISTRIBUTION

## All Communicable Diseases

	Feb., 1926	Feb., 1925
Total cases (all causes)	13,025	10,529
Case rate per 100,000 population	309.1	253.2

## Certain Prevalent Diseases

	Feb., 1926	Feb., 1925
<i>Diphtheria</i>	273	497
Total cases	273	497
Case rate per 100,000 population	6.5	12.0

	Feb., 1926	Feb., 1925
<i>Measles</i>	6,441	2,204
Total cases	6,441	2,204
Case rate per 100,000 population	152.8	53.0

Cities and towns noticeably exceeding their median endemic indexes\*:

Attleboro	(1)	100	Acton	(0)	43
Chatham	(0)	73	Arlington	(5)	66
Fall River	(6)	145	Chelmsford	(0)	40
Westport	(0)	27	Concord	(0)	31
Avon	(0)	77	Medford	(24)	93
Bridgewater	(0)	14	Somerville	(37)	111
Brockton	(5)	295	Waltham	(4)	68
Cambridge	(66)	130	Clinton	(0)	228
Hingham	(3)	26	Fitchburg	(3)	216
Marlboro	(0)	37	Harvard	(0)	38
Newton	(6)	540	Leominster	(2)	588
Wellesley	(1)	129	Northbridge	(0)	162
Beverly	(2)	42	Southbridge	(0)	45
Everett	(16)	46	Templeton	(0)	79
Haverhill	(12)	146	Westboro	(0)	116
Lynn	(12)	146	Worcester	(36)	182
Peabody	(1)	95	Northampton	(15)	52
Salem	(5)	29	Palmer	(0)	21
Saugus	(0)	21	Springfield	(33)	702
Swampscott	(0)	43	Westfield	(0)	34

	Feb., 1926	Feb., 1925
<i>Scarlet Fever</i>	1,119	1,462
Total cases	1,119	1,462
Case rate per 100,000 population	26.6	35.2

Cities and towns noticeably exceeding their median endemic indexes\*:

New Bedford	(17)	47	Lowell	(21)	51
Everett	(12)	34			

	Feb., 1926	Feb., 1925
<i>Tuberculosis, Pulmonary</i>	437	439
Total cases	437	439
Case rate per 100,000 population	10.4	10.6

	Feb., 1926	Feb., 1925
<i>Tuberculosis, Other Forms</i>	73	90
Total cases	73	90
Case rate per 100,000 population	1.7	2.2

	Feb., 1926	Feb., 1925
<i>Typhoid Fever</i>	23	33
Total cases	23	33
Case rate per 100,000 population	.5	.8

	Feb., 1926	Feb., 1925
<i>Whooping Cough</i>	1,653	602
Total cases	1,653	602
Case rate per 100,000 population	39.2	14.5

Cities and towns noticeably exceeding their median endemic indexes\*:

Attleboro	(0)	23	Arlington	(2)	68
Boston	(89)	590	Belmont	(12)	21
Cambridge	(14)	90	Lawrence	(11)	24
Lynn	(9)	83	Medford	(3)	31
Malden	(4)	49	Waltham	(5)	62
Melrose	(0)	19			

\*The median endemic index is obtained by arranging in arithmetical sequence the monthly totals of reported cases for the past five years and selecting the middle figure. The numbers in parentheses after the name of each city and town indicate the median endemic index for that city or town; the number without parentheses indicates the cases reported during the current month.

MASSACHUSETTS DEPARTMENT OF PUBLIC  
HEALTHDISEASES REPORTED FOR THE WEEK ENDING  
MARCH 13, 1926

Anterior poliomyelitis	1	Pneumonia, lobar	161
Chickenpox	217	Scarlet fever	251
Diphtheria	57	Septic sore throat	3
Dog-bite	9	Syphilis	33
Encephalitis lethargica	2	Suppurative conjunctivitis	8
Epidemic cerebrospinal meningitis	1	Tetanus	2
German measles	266	Trachoma	1
Gonorrhea	88	Tuberculosis, pulmonary	116
Hookworm	1	Tuberculosis, other forms	19
Influenza	65	Tuberculosis, hilum	7
Malaria	1	Typhoid fever	4
Measles	1283	Whooping cough	527
Mumps	115		
Ophthalmia neonatorum	24		

DISEASES REPORTED FOR THE WEEK ENDING MARCH 20, 1926				CONNECTICUT DEPARTMENT OF HEALTH MORBIDITY REPORT FOR THE WEEK ENDING MARCH 13, 1926			
Anterior poliomyelitis	1	Ophthalmia neonatorum	42	Measles	1284	Conjunctivitis inf.	2
Anthrax	1	Pneumonia, lobar	237	Last week	1037	German measles	9
Chickenpox	151	Scarlet fever	281	Diphtheria	48	Influenza	99
Diphtheria	66	Septic sore throat	1	Last week	53	Mumps	31
Dog-bite	2	Syphilis	47	Diphtheria bacilli carriers	65	Pneumonia, lobar	91
Encephalitis lethargica	4	Suppurative conjunctivitis	4	Scarlet fever	82	Poliomyelitis	2
Epidemic cerebrospinal meningitis	2	Trachoma	1	Last week	95	Septic sore throat	1
German measles	246	Tuberculosis, pulmonary	109	Whooping cough	117	Tuberculosis, pulmonary	54
Gonorrhea	75	Tuberculosis, other forms	21	Last week	88	Tuberculosis, other forms	5
Influenza	272	Tuberculosis, hilum	3	Bronchopneumonia	102	Chancroid	1
Measles	1251	Typhoid fever	5	Cerebrospinal meningitis	1	Gonorrhea	11
Mumps	95	Whooping cough	520	Chickenpox	72	Syphilis	21

CONNECTICUT STATE DEPARTMENT OF HEALTH

PREVENTABLE DISEASES IN CONNECTICUT

REPORTED BY YEARS FOR THE PERIOD 1919-1925

Disease	1919	1920	1921	1922	1923	1924	1925
Actinomycosis	—	—	—	—	2	—	—
Anthrax	1	1	—	3	—	—	4
Botulism	—	—	—	2	—	—	1
Cerebrospinal meningitis	44	91	78	91	83	47	35
Chickenpox	1,350	1,466	2,272	2,221	2,602	2,595	2,601
Cholera, Asiatic	—	—	—	—	—	—	—
Conjunctivitis (inf.)	102	9	167	179	89	49	48
Ophthalmia neonatorum	6	1	12	27	7	12	5
Diphtheria	3,388	3,754	3,361	2,924	2,427	2,110	1,712
Dysentery (amebic)	—	—	—	4	10	3	5
Dysentery (bacillary)	5	10	16	16	18	17	7
Encephalitis (epid.)	4	40	74	47	110	54	46
Favus	11	4	1	2	3	3	1
German measles	99	112	96	302	226	419	1,119
Hookworm infection	—	—	—	1	1	1	—
Leprosy	1	1	1	1	—	—	—
Malaria	8	22	27	80	47	37	22
Measles	5,884	8,425	4,620	8,558	9,659	4,626	5,544
Mumps	335	1,492	2,294	803	1,327	3,549	1,094
Paratyphoid fever	18	11	48	15	15	17	70
Pellagra	1	—	—	1	—	—	—
Plague	—	—	—	—	—	—	—
Poliomyelitis	12	41	86	47	88	120	50
Scarlet fever	2,663	4,028	4,001	3,132	3,372	5,658	4,005
Septic sore throat	24	19	35	26	35	66	134
Smallpox	6	2	8	447	52	100	4
Tetanus	4	13	22	28	21	21	18
Trachoma	5	16	24	15	8	6	11
Trichinosis	—	2	15	5	9	12	11
Tuberculosis (pulmonary)	1,640	1,905	1,828	1,605	1,555	1,569	1,354
Tuberculosis (other forms)	420	148	120	124	136	167	158
Typhoid fever	415	426	460	315	295	238	265
Typhus fever	—	—	1	—	1	—	1
Whooping cough	904	3,649	2,905	2,109	2,758	2,237	3,743
Yellow fever	—	—	—	—	—	—	—
Yaw	—	—	—	—	1	—	—
	17,360	25,688	22,572	23,130	24,959	23,735	21,968
Influenza	10,664	23,931	282	5,941	2,523	260	371
Pneumonia (lobar)	545	1,545	1,060	1,655	1,373	1,283	1,769
Gonorrhea	1,350	1,345	1,025	658	670	1,062	1,169
Syphilis	2,014	2,238	2,505	936	664	1,387	1,303
Pneumonia (broncho)	—	—	—	—	—	—	1,266
	31,923	54,747	27,444	32,320	30,189	27,727	27,846

POPULATION OF CONNECTICUT 1919-1925

1919	1920	1921	1922	1923	1924	1925
1,464,360	1,393,292	1,420,576	1,447,838	1,475,122	1,502,405	1,529,688

## NEWS ITEMS

**THE JOURNEY TO DALLAS**—The Missouri-Kansas-Texas Railroad has sent a circular of information relating to routes to the A. M. A. convention. The office at St. Louis, Mo., will furnish information.

**GIVES \$4,000,000 TO MEDICAL SCHOOLS**—Chicago, March 13—A new gift of \$4,000,000 to the Northwestern University for the use of the medical and dental schools was made by Mrs. Montgomery Ward of Chicago. About two years ago Mrs. Ward donated an equal sum for the same schools. The Montgomery Ward Memorial Building on the McKinlock Memorial Campus in downtown Chicago is now being constructed with the aid of the funds. Happily the funds go for the building of a center and the endowment of a medical and dental faculty whose headquarters will face the lake front which for so many years received the unceasing guardianship of the late Montgomery Ward.

Mrs. Ward is in California at present and it was left to Mr. Charles H. Thorne to make the direct award of the gift to President Scott and the other members of the board of trustees of Northwestern University. In making the gift Mr. Thorne wrote a letter to the board of trustees in which he said, among other things:

"Mrs. Ward's last gift of \$4,000,000 is most encouraging. It strengthens our hope that we shall be able to carry out the program for the McKinlock Campus for the next years as planned. The sum required for this program is \$20,000,000." — *Boston Herald*, March 14.

**DR. ARIAL W. GEORGE** has been awarded the Diploma in Medical Radiology and Electrology from the University of Cambridge, England.

**THE NEWTON HOSPITAL DRIVE**—It is reported that over a thousand men and women are to be enlisted in the drive to raise sufficient money to provide for new buildings for the Newton Hospital, which has served the people for forty years.

**PUBLIC BEQUEST TO THE ADDISON GILBERT HOSPITAL**—By the will of Lucy Brown Davis the Addison Gilbert Hospital will receive \$15,000, the income of which is to be used to support a room to be named in honor of the donor.

**DR. S. B. WOLBACH**, Professor of Pathology at Harvard University, addressed the scientific staff of the Rockefeller Institute, New York, on Friday, March 26, 1926, on "A Résumé of Rickettsia Research."

## NOTICES

## UNITED STATES CIVIL SERVICE EXAMINATION

The United States Civil Service Commission announces the following open competitive examination:

## Head Nurse

Receipt of applications for head nurse will close May 11. The examination is to fill a vacancy at Freedmen's Hospital, Washington, D. C., at \$1140 a year, plus room, board and laundry, and vacancies occurring in positions requiring similar qualifications.

Full information and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C., or the secretary of the Board of United States Civil Service Examiners at the postoffice or custom house in any city.

## UNITED STATES CIVIL SERVICE EXAMINATIONS

## Graduate Nurse

## Graduate Nurse (Visiting Duty)

Applications will be rated as received until June 30, 1926.

The United States Civil Service Commission announces an open competitive examination for the positions listed above. Vacancies in the Departmental Service, Washington, D. C., in the United States Veterans' Bureau, and in the Indian and Public Health Service, and in positions requiring similar qualifications, will be filled from this examination, unless it is found in the interest of the service to fill any vacancy by reinstatement, transfer, or promotion.

For particulars apply to Civil Service Commission, Washington, D. C.

## REPORTS AND NOTICES OF MEETINGS

## THE NEW ENGLAND SOCIETY OF PSYCHIATRY

On Wednesday, April 7, 1926, the regular spring meeting of the New England Society of Psychiatry will be held at the Medfield State Hospital, Medfield, Mass., as a guest of the Superintendent, Dr. E. H. Cohoon. A very interesting program has been arranged.

## MASSACHUSETTS GENERAL HOSPITAL

## CLINICAL MEETING

A Clinical Meeting, the last of the winter series, will be held in the Administration Building, Mass. Gen. Hospital, Fruit Street, on Thursday, April 8, 1926, at 8:15 P. M.

## PROGRAM

1. Some Newer Aspects of Thoracic Surgery, Dr. Wyman Whittemore.
2. The Physiology of Collapse Therapy of the lung, Dr. E. D. Churchill.
3. Observation on Fractures, Dr. Charles L. Seudder.

A cordial invitation to attend these meetings is extended to physicians, medical students and nurses.

## COMMITTEE ON HOSPITAL MEETINGS.

## NEW ENGLAND PEDIATRIC SOCIETY

The ninety-seventh meeting of the New England Pediatric Society will be held at the Boston Medical Library on Friday, April 9, 1926, at 8:15 p. m.

The following papers will be read:

1. The Feeding of the Newborn Infant from the Obstetrician's View Point, Frederick C. Irving, M. D., Boston.
2. Establishment and Re-establishment of

Mother's Milk, Warren R. Sisson, M. D., Boston.

The Feeding of the Normal Infant at Beth. Maynard Ladd, M. D., Boston.

Light refreshments will be served after the meeting.

JOHN LOVETT MORSE, M. D., *President*.

JOSEPH GARLAND, M. D., *Secretary*.

#### MEDICAL VETERANS OF THE WORLD WAR CLUB

A MEETING of the Medical Veterans of the World War Club was held at The Red Tavern, Methuen, on Thursday evening, March 18, 1926, at 8:15 p. m.

There was an interesting discussion relating to the appearance of nostrum advertising in the columns of a magazine published by the American Legion and sentiment was expressed that it would be a wise plan for Legion members to protest to the General Manager at Indianapolis, Ind., and request a discontinuance of the practice in the interest of the health of the soldiers.

The Secretary, Joseph M. Scanlon, M. D., reviewed the history of the Club since its organization in 1920.

William H. Merrill, M. D., read a scholarly paper on the subject of "The Habit of Prescribing Medicinal Preparations" in which the reader accentuated the principle that in functional disorders a more permanent cure is made by advice leading to the education and instruction of the patient rather than the prescription of remedies given for their psychical effect. In the former case the patient is relieved of his misery permanently and in the second case he returns for more medicine.

#### MEETING OF THE NEW ENGLAND HEART ASSOCIATION

THE New England Heart Association met at the Children's Hospital on Thursday evening, March 18th. Dr. Henry Jackson presided.

Dr. Eli Charles Romberg presented a study of a series of 200 cases of Chorea, made in the wards and Out-Patient Department of the Massachusetts General Hospital. A study of the seasonal incidence in these cases shows that the highest percentage begin in the spring. Thirty percent began in the first three months of the year, 35 percent in the second quarter, 12 percent in the third, and 18 percent in the last three months of the year. Chorea occurring for the first time generally takes place in the Spring. Recurrences were most common in October and November. Eighty-eight cases were males and 112 were females. Forty percent of the cases were between the ages of five and ten and fifty-nine percent between ten and fifteen. The average age is in the period between seven to thirteen.

Chorea is supposed to be rare among colored people. In this series there were three colored males and one colored female, which is higher than commonly supposed. The Jews, who are a race of high nervous tension, seem to have and highest incidence, but this high percentage may be due to the section of the city in which the Hospital is.

With regard to the influence of heredity, only one percent of the cases had a history of the disease in members of the immediate family, while two percent gave a history of uncles or cousins, etc., being affected. There were no cases of chorea during pregnancy associated with the cases in this series.

Environment and social conditions play a part. Where these are poorest we find the most cases of Chorea. Precocious, bright children in a poor environment are most prone to develop Chorea.

In thirty percent of the cases there was a history of rheumatic fever. In twenty-one percent there was rheumatism in the family. Sixty-two percent had tonsillitis one or more years before Chorea. Twenty-four percent gave a history of repeated tonsillitis. Fifty-one percent had endocarditis and 40 percent had both rheumatism and endocarditis.

Fright, according to the history of the parents, seemed to be a definite causal factor in 15 percent of the cases. In 60 percent, no cause could be found. In 3 percent, scarlet fever was the sole antecedent disease. Not more than 20 percent of the series had more than three of the diseases of childhood preceding the attack of Chorea.

We do not know much more about Chorea or rheumatic fever than we did years ago. The mortality has not decreased. It is, therefore, important to recognize Chorea in the prodromal stage, so that the child may be put to bed and given routine treatment to build up the resistance and the reserve. Chorea never occurs suddenly. There is always a definite prodromal state in which the child is irritable, highly unstable emotionally, extreme excitable, has lost its appetite, has restless nights, and looks rather tired and worn out. There are definite rings under his eyes, which is easily recognizable even in children who are very well nourished and developed. Particularly must we consider these symptoms, if there is a history of rheumatism or heart trouble in the family. This is one of the most important points in the prevention of Chorea.

Eighty percent of the cases were classified as mild or simple Chorea and 20 percent were severe. One case was malignant. The mild form of the disease develops insidiously. The child becomes clumsy and inattentive. There is often a sudden change in the hand-writing. Enuresis, nocturia, and night terrors may also devel-

op. The appetite is poor and there are pains in the extremities which are considered to be rheumatic in character. The choreiform movements begin first in an extremity and then may become general. Even in mild cases there is often a definite weakness of an arm or leg.

The severe type is supposed to be due to a fright or shock. Such factors often seem to play a role in precipitating the attack. In the severe form, there is greater loss of power and the mental symptoms are much more pronounced. The muscles are limp and hypotonic. The jaw opens and closes and the tongue is forced against the cheeks and the roof of the mouth. They may have temporary diplopia. There is a typical "hyperthyroid" stare. Irregular breathing due to involvement of the diaphragm is a feature. They may be unable to take food because of the lack of control of the mouth and tongue.

In mild cases the knee-jerks are often depressed, but they may be exaggerated in the severe type. After Chorea has ceased, the knee-jerks may show the same peculiar phenomena as they did during the attack. This may be due to permanent damage in the brain. Some claim that lesions of the lenticular nucleus occur.

Dr. Romberg presented a case with changed reflexes. This girl, now thirteen years of age, had Chorea at nine and again two years later. The knee-jerks are exaggerated and sustained until the leg tires and returns to its position. Four other cases were cited which showed this sustained position to a less marked degree, but there were many cases which presented involvement either of the "cog-wheel" or lagging reflex.

Among the heart complications, many show mitral stenosis and regurgitation. There was only one case in the series with involvement of both mitral and aortic valves.

A secondary anemia occurs in Chorea. There is no leucocytosis unless the case is complicated; the urine is negative. The duration of the disease is from six weeks to several months although a residual of the manifestations may persist much longer. Thirty-six percent of the cases in the series had recurrences and 5 percent had three attacks.

Organic heart disease is most common during the recurrences.

The general principles of treatment in Chorea are to remove any definite foci of infection, provide absolute rest and pleasant isolation, allaying apprehension and mental disturbance as far as possible. Medicinally Fowler's solution has long been used without any definite basis. It may act as a tonic and stimulate the production of red blood cells. Liver is also given for the anemia. Salicylates are used not because they cure Chorea, but because they

seem to comfort the patient and because Chorea is supposed to be some rheumatic manifestation and the salicylates seem to be specific in rheumatism. It is not advisable to bother the patient much with the removal of these foci until he is definitely quieted down, because any undue surgical interference activates the Chorea. The patient is given a full varied diet with abundant vegetables to counteract the anemia. Some Malt Extract is helpful as an assured caloric intake. If Chorea is complicated by rheumatic fever with red and swollen joints the salicylates are given in larger doses. Hydro-therapy is valuable as a means of quieting the patient. Intraspinal injections of magnesium sulphate have also been used. Goodman has injected auto-serum intraspinaly and claims good results. Others who have tried this treatment have been unable to obtain effects that would warrant its general adoption. It is best not to undertake any radical therapy particularly where there is some surgery attached to it unless there is some definite logical basis for it.

There is a difference of opinion on the pathogenesis of Chorea. Some think that the changes found in the lenticular nucleus are secondary changes. Others advance the theory of emboli from the heart, but the fact that there are many cases of Chorea without heart involvement makes this hypothesis improbable. Another theory is that the disease is a mild curable encephalitis.

In discussing Dr. Romberg's address, Dr. Green gave some statistics on Chorea from the records of the Children's Hospital. From 1918 to 1920 there were 213 cases treated in the Out-Patient Department and the Wards. 137 were girls and 76 were boys. The greatest number of cases occurred in the ninth year. None of the cases was under four years of age. In this series the females were more subject to recurrences than the males. Twenty-five percent had bad tonsils or bad teeth. Thirty cases developed after tonsillectomy. Six cases had abscessed teeth. Sixty-three cases had definite endocarditis. Six cases had as many as five attacks. In 9 cases the condition lasted two or three years.

Dr. Blackfan discussed the differential diagnosis of Chorea. It has frequently been confused with epidemic encephalitis. Anterior poliomyelitis with flaccid paralysis must also be considered in the differential diagnosis. Dr. Blackfan considers rest, nutritive food and hydrotherapy as the essentials in treatment. Sedatives are used only in the severe cases. These patients acquire a tolerance to sedatives very quickly, so that large doses must be given to get an effect. After the Chorea ceases there is usually a long convalescence from the effect of the drug.

Dr. Stone, of Texas, stated that the incidence of Chorea is higher in the South than that of acute rheumatic fever. The incidence of endocarditis in the South is greater than the incidence of Chorea and rheumatic fever would indicate. Apparently endocarditis may occur as a primary condition. He has seen no cases of Chorea among the negroes of the South.

In closing the discussion, Dr. Romberg pointed out that the degree of the attack of Chorea apparently has nothing to do with the number or the severity of the complications; that a mild case may show later severe cardiac complications while a severe case of Chorea may clear up without any complications. That is why it is so important to keep the mild case in bed as long as the Chorea persists. Even toilet privileges are not allowed a patient because it seems that such efforts undo the work of the whole day.

#### SOCIETY MEETINGS

##### DISTRICT MEDICAL SOCIETIES

###### Essex South District Medical Society

Thursday, May 6—Censors meet at Salem Hospital. 3:30 P. M.  
Tuesday, May 11—The Tavern, Gloucester. Annual meeting. Speaker to be announced.

###### Essex North District Medical Society

May 12, 1926—The annual meeting at the Anna Jaques Hospital, Newburyport.

###### Middlesex East District Society

April 14—At the Harvard Club at 6:30 P. M. Address by Dr. William E. Ladd; subject, "Kidney Affections in Childhood."

May—Annual meeting, Colonial Inn, North Reading. Subject and speaker to be announced.

###### Suffolk District Medical Society

April 28—At 8:15 P. M. Annual meeting. Election of officers. "Some Diagnostic, Prognostic and Therapeutic Aspects of Disorders of the Blood," Drs. George H. Minot, Cyrus C. Sturgis and Raphael Isaacs.

Notices of meetings must reach the JOURNAL office on the Friday preceding the date of issue in which they are to appear.

#### BOOKS RECEIVED FOR REVIEW

*Not Speaking of Operations.* By John Finch Barnhill. Boston: The Stratford Company. 159 pages. Price: \$2.

*Muscular Activity.* By Archibald Vivian Hill. Baltimore: Williams & Wilkins Company. 115 pages. Price: \$2.75.

*Annual Report of the Surgeon-General of the Public Health Service of the United States.* 1925. 314 pages.

*Light and Health.* By M. Lucklesch and A. J. Pacini. Baltimore: Williams & Wilkins Company. 302 pages. Price: \$5.

*I Believe in God and in Evolution.* By William W. Keen. Philadelphia and London: J. B. Lippincott Company. 109 pages. Price: \$1.25.

*Lectures on Nutrition—1924-1925.* Philadelphia and London: W. B. Saunders Company. 243 pages. Price: \$2.50.

*Our Present Knowledge of Heredity—1923-1924.* Philadelphia and London: W. B. Saunders Company. 250 pages. Price: \$2.50.

*A Medical Formulary.* By E. Quin Thornton. Philadelphia and London: Lea & Febiger. 352 pages. Price: \$2.50.

*The Diseases of Children.* Sir James Frederic Goodhart. (Edited by George F. Still.) Philadelphia: Lea & Febiger. 966 pages. Price: \$3.50.

*Scoliosis—Rotary Lateral Curvature of the Spine.* By Samuel Kleinberg. New York: Paul B. Hoeber, Inc. 311 pages. Price: \$6.

*Transactions of the American Association of Genito-Urinary Surgeons.* Vol. XVIII—1925. Baltimore, Md.: Williams & Wilkins Company. 517 pages.

*Abdominal Operations.* Vols. I and II. By Sir Berkeley Moynihan. Philadelphia and London: W. B. Saunders Company. 575 and 642 pages, respectively. Price per set: \$20.

*Lead Poisoning.* By Joseph C. Aub, Lawrence T. Fairhall, A. S. Minot and Paul Rezinkoff. Baltimore: Williams & Wilkins Company. 265 pages. Price: \$4.

*The Pathology of Tumours.* 2nd ed. By E. H. Kettle. New York: Paul B. Hoeber, Inc. 285 pages. Price: \$5.

*The Diagnosis and Treatment of Tuberculosis of the Hip.* By G. R. Girdlestone. Oxford Medical Publications. 94 pages. Price: \$2.50.

*Modern Medicine—Its Theory and Practice.* Vol. II. Edited by Sir William Osler, reedited by Thomas McCrae. Philadelphia and New York: Lea & Febiger. 891 pages. Price: \$9.

*Practical Helps in the Study and Treatment of Head Injuries.* By Adolph M. Hanson. Boston: Richard G. Badger. 109 pages. Price: \$3.

*Mental Invalids.* C. C. Easterbrook. Edinburgh: Messrs. Oliver & Boyd. 86 pages. Price: 5/-net.

*The Principles and Practice of Endocrine Medicine.* By William Nathaniel Berkeley. Philadelphia and New York: Lea & Febiger. 368 pages. Price: \$4.50.

*Ears and the Man.* By Annetta W. Peck, Estelle E. Samuelson and Ann Lehman. Philadelphia: F. A. Davis Company. 217 pages. Price: \$2 net.

*Public Health Law.* By James A. Tobey. Baltimore: Williams & Wilkins Company. 304 pages. Price: \$4.50.

*Nephritis.* By Herman Elwyn. New York: The Macmillan Company. 247 pages. Price: \$5.

*A Handbook for Senior Nurses and Midwives.* By J. K. Watson. Oxford University Press. 554 pages. Price: \$4.

*Intestinal Tuberculosis—Diagnosis and Treatment.* By Lawrason Brown and Homer L. Sampson. Philadelphia and New York: Lea & Febiger. 304 pages. Price: \$4.

*Psychoanalysis and Beyond Psychoanalysis.* By Leonard L. Landis. American Association of Independent Physicians. 212 pages.

*Studies from the Rockefeller Institute for Medical Research.* Reprints Vol. LV. New York: Rockefeller Institute for Medical Research. 599 pages. Price: \$2.

*Sight Saving Classes.* Cleveland Public Schools. Board of Education, Cleveland, Ohio. February, 1926. 68 pages. Price: \$1.

*Individual Gymnastics. A Handbook of Corrective and Remedial Gymnastics.* Third edition revised. By Lillian Curtis Drew. Philadelphia and New York: Lea & Febiger. 276 pages. Price: \$2.25.

*A Manual of Clinical Laboratory Methods.* By Clyde Lottridge Cimmer. Second edition revised. Philadelphia and London: Lea & Febiger. 547 pages. Price: \$6.50.

*The Evolution of Orthopaedic Surgery.* By Robert Bayley Osgood. St. Louis: C. V. Mosby Company. 70 pages.

*The Surgical Clinics of North America.* December, 1925. Vol. 5—No. 6. Philadelphia number. Philadelphia and London: W. B. Saunders Company. Price per set: Paper, \$12; cloth, \$16.

- Transactions of the Thirty-first Annual Meeting of the American Laryngological, Rhinological and Otological Society, Inc.*, 1925. Published by the Society. 712 pages.
- Archives of the Andrew Todd McClintock Memorial Foundation for the Study of Diseases of the Alimentary Canal*. Vol. 1. Pleomorphism in Bacterial Protoplasm. 134 Andrew Todd McClintock. Privately printed. 240 pages.
- Transactions of the American Gynecological Society*. Vol. 50—1925. Philadelphia: William J. Dorman, Printer. 317 pages.
- International Clinics*. Vol. 1. 36th Series, 1926. Philadelphia and London: J. B. Lippincott Company. 309 pages.
- The Pharmacopocia of the United States of America*. Tenth Decennial Revision. Official from January 1, 1926. Agent: J. B. Lippincott Company. 626 pages. Price: \$4.
- Facts on the Heart*. By Richard C. Cabot. Philadelphia and London: W. B. Saunders Company. 781 pages. Price: \$7.50.
- Forty-eighth Annual Report of the Department of Health of the State of New Jersey*. 1925. Trenton, N. J.: MacCrellish & Quigley Company, Printers. 280 pages.
- Buchanan's Text-book of Forensic Medicine and Toxicology*. By John E. W. MacFall. Edinburgh: E. & S. Livingstone, and New York: William Wood & Co. 445 pages. Price: \$5.

### BOOK REVIEWS

*Intestinal Tuberculosis—Diagnosis and Treatment*. By LAWRESON BROWN, M. D. and HOMER L. SAMPSON. Lea & Febiger, Philadelphia. Price, \$4.00.

This volume of 300 pages represents distinctly the last word on the subject of intestinal tuberculosis. Coming from two such authorities as Dr. Brown and Dr. Sampson who, during the past ten or fifteen years, have been pre-eminent pioneers in the study of this subject it is of commanding interest not only to that part of the medical profession which is dealing specifically with the tuberculosis problem but to general practitioners as well. Every general practitioner of necessity has to diagnose and treat tuberculosis in various forms and anything which can help in the early diagnosis of such a distressing condition as the intestinal complications when discovered late will be of inestimable benefit.

The book is printed on the best of paper, well paragraphed, with sub-headings, and has many excellent diagrams and plates. It is divided into 28 chapters, the first 13 considering the history of intestinal tuberculosis, the anatomy, the normal physiology of the intestines, the pathological anatomy, the etiology of intestinal tuberculosis and experimental work done on the subject. The next 8 chapters consider the symptoms and diagnosis of this condition and the rest of the book is devoted to the prognosis, prophylaxis and especially treatment.

The writers are ardent advocates of artificial heliotherapy by means of one or another of the various lamps for producing ultra-violet rays and one must admit that the good results they

report on a fairly large series of cases justify their optimism. One cannot help but feel, however, that there is almost too much attention given to artificial sunlight and not enough to heliotherapy by means of actual sunlight. Very likely their reason for feeling this way is because Saranac Lake where their investigations have been carried on is not noted for its large proportion of sunny days, at least for a considerable part of the year. The fact remains, however, that such an authority as Dr. LoGrasso of Perysburg, N. Y., than whom it will be generally admitted there is no greater authority on heliotherapy in this country, in a recent address before the Trudeau Society of Boston stated as his distinct opinion that in all forms of tuberculosis direct sunlight was distinctly better in every way than that given by artificial means which was at best a poor substitute.

On the whole the book is a distinct contribution by two men who have given their lives to the study of tuberculosis. A study of this volume should make a radical change in the attitude of all of us who have hitherto looked upon intestinal tuberculosis as not only most distressing but a fatal complication of phthisis. Even if many of us are not willing to go quite so far in accepting their x-ray evidence as a wise and certain means of early diagnosis, the writers certainly have given grounds for their enthusiastic acceptance of their own theories and after reading their book one feels that the burden of proof is upon the roentgenologists of this country who do not agree with them to produce evidence to support their non-belief. The book is a welcome contribution to our literature on this subject.

*Welfare Magazine*. Department of Public Welfare, State of Illinois, January, 1926.

The magazine appears in a new form as Number 1, Volume XVII, of the old *Institution Quarterly*, published by the same department. It contains 221 pages of articles on a wide variety of subjects related to public welfare. The papers, while written by well known scientific men and women, are "popular" in style and obviously produced for the education of the general public. Many of them deal with mental hygiene and perhaps those of most interest are by Dr. Herman M. Adler, Director of the Institute for Juvenile Research, Chicago, on the "Prevention of Delinquency and Criminality by Psychiatry" and his report on the "Ninth International Prison Congress" held in London, August 1925. The actual procedure of investigating a case at the Institute for Juvenile Research is briefly but adequately described by Dr. Sherman W. Searle, with interesting illustrations of the examinations. These papers will interest all workers in the field of psychiatry.